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COLONIAL REPORTS—ANNUAL.

No. 1378. — 1407

# BAHAMAS

## REPORT FOR 1927.

(For Report for 1925 see No. 1285 (Price 6d.) and for Report for 1926  
see No. 1330 (Price 9d.).)



LONDON:

PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:

Adastral House, Kingsway, London, W.C.2; 120, George Street, Edinburgh;

York Street, Manchester; 1, St. Andrew's Crescent, Cardiff;

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**I.—HISTORY AND GEOGRAPHY.**

1. The Colony of the Bahamas consists of an archipelago of coral islands, "cays" and rocks, lying to the east of Florida and the north of Cuba. They lie along two great coral banks of unequal size called the Little Bahama Bank and the Great Bahama Bank.

2. The Little Bahama Bank, which is the more northerly of the two, begins at the Matanilla Reef opposite the east coast of Florida and distant about 70 miles from Palm Beach, one of the principal watering places of that State. This Bank contains only two large islands, Grand Bahama and Abaco, but there is a large number of small cays fringing the northern shores of these two islands.

3. To the south of the Little Bahama Bank and separated from it by the North-West and North-East Providence Channels is the



Great Bahama Bank, on which most of the islands of the Bahamas lie. To the westward is a line of cays, of which the principal is Bimini, which extends along the eastern extremity of the Gulf Stream. Bimini is only fifty miles from Miami in Florida. South-east of Bimini is Andros, which, although generally spoken of as one island, is in reality a small archipelago in itself, about 95 miles long with an extreme breadth of 38 miles. Andros is intersected at several points by shallow waterways which permit of navigation through the island, from shore to shore, by vessels of small draught. East of Andros is New Providence which, although by no means the largest, is easily the most important of the islands, as it contains the capital, Nassau, which is the chief port, and fully a quarter of the total population of the Colony. East again of New Providence lies Eleuthera, with Harbour Island close to its northern shores; on Harbour Island the first settlement was made by the Adventurers who laid the foundations of the present Colony. The chain is continued south-east of Eleuthera by Cat Island, San Salvador (or Watling), the first landfall of Columbus in the New World, Exuma, Long Island, Rum Cay, the Fortune Island group (which includes Crooked Island, Acklin's Island, and Long Cay), Mayaguana, and Inagua.

4. Eastwards of Inagua lie the Turks and Caicos Islands which, although geographically part of the Bahamas, were separated from them politically in 1848 and now form a Dependency of Jamaica.

5. In addition to the islands mentioned there are numerous cays and rocks, the total area of the Colony being about 4,400 square miles or one-half the size of Wales. It is said that there are about 700 islands and over 2,000 rocks. The islands are, as a rule, long, narrow, and low-lying. The ground is very rocky, but among the honeycomb rock there are pockets of rich and fertile earth. Owing to the rocky nature of the soil the plough is never used, and a cultivated "field" in the Bahama Islands would astonish a farmer from any other part of the world. The surface rock is exceedingly hard, but the rock beneath is soft and is easily sawn into blocks, making an excellent building stone.

6. There are no mountains and very few hills, but in spite of this the islands are by no means lacking in beauty, the pure white sand of the beaches and the wonderful colouring of the sea making a picture which is not easily forgotten. It is probable that the islands were all thickly wooded at a comparatively recent date, but little forest remains except at Abaco, Andros, and Grand Bahama. On these three islands there are extensive pine forests, and a certain amount of mahogany and hardwood exists at Andros. A timber company is at present working the pine forest on Abaco.



7. The following table will show the area and population of each of the principal islands of the Group:—

<i>Island of Group.</i>	<i>Area in square miles.</i>	<i>Population. at last Census (1921).</i>
Abaco ... ..	776	3,993
Andros ... ..	1,600	6,976
Berry Islands ... ..	14	328
Bimini ... ..	8	610
Eleuthera and Harbour Island ...	166	7,547
Exuma and cays ... ..	100	3,730
Grand Bahama ... ..	430	1,695
Inagua ... ..	560	937
Long Island ... ..	130	4,659
Fortune Island group (including Long Cay, Acklin's and Crooked Islands) ... ..	204	3,458
Mayaguana ... ..	96	432
New Providence ... ..	58	12,975
Ragged Island group ... ..	5	366
Rum Cay ... ..	29	338
Cat Island ... ..	160	4,273
San Salvador or Watling ... ..	60	686
<b>Totals ... ..</b>	<b>4,396</b>	<b>53,003</b>

8. The total population is approximately 53,000, mostly the descendants of African slaves. There is, however, a larger proportion of whites in the Bahamas than in any other West Indian Colony, this being due in the first place to the better climate and in the second place to the fact that after the War of American Independence a number of soldiers were settled in the Bahamas. English is the only language spoken.

9. When the Bahamas were first discovered in 1492 they were inhabited by a peaceful race of Indians who were soon removed to Hayti by the Spaniards to work in the mines. A few stone implements are occasionally found, but, apart from this, there is no trace of the original inhabitants. The Spaniards made no attempt to colonise the islands, which remained uninhabited until about the year 1629, when they were included in a Royal Grant, from which date they were visited from time to time by settlers from Bermuda. In 1647 a Company of Eleutherian Adventurers was formed in London for the purpose of colonising the islands, which were granted by Parliament to the Company despite the earlier Royal Grant. In 1670 yet a third Grant was made by Charles II, vesting the islands in six Lords Proprietors.

10. The Lords Proprietors received very complete powers for the government of the Islands. They were given the right to appoint Governors and other officials, to enact laws with the advice, assent, and approbation of the freemen, to erect forts and raise troops, to make war, and even to confer titles of honour. Two years after the grant of the charter the first Governor was sent to the Bahamas by the Lords Proprietors. He and his successors found it extremely difficult to cope with the buccaneers, who at this time were the real rulers of the settlement. In 1673 one Governor was seized and deported to Jamaica; in 1690 another was deposed and imprisoned, and it seems that the only Governors who escaped trouble were those who left the inhabitants to do as they pleased. In addition to internal troubles the Governors appointed by the Lords Proprietors had to deal with invasion. In 1680 the Spaniards destroyed the settlement and carried off the Governor to Cuba where he was "roasted on a spit." In 1703 a combined force of French and Spaniards destroyed Nassau once again and carried off the negro slaves, most of the white inhabitants fleeing to Carolina. The new Governor, who arrived in 1704, found New Providence totally uninhabited, and returned to England.

11. Within a few years, however, Nassau was re-established as the headquarters of the pirates in West Indian waters, and so great were the depredations of these pirates that the British Government found it necessary to send out a Governor to control the Colony and to drive the pirates from their stronghold. This Governor, Captain Woodes Rogers, arrived in Nassau in 1718, and in December of that year eight of the leading pirates were executed and the others compelled to give up their former occupation. A period of comparative quiet followed, but in 1776 a fleet belonging to the rebellious American Colonies captured the town of Nassau and carried off the Governor. Some ammunition and a quantity of stores were taken, but the place was evacuated in a few days. Five years later a Spanish force took possession of Nassau and left a garrison, but in 1783 the Spaniards were driven out by a British expedition.

12. The subsequent history of the Bahamas is comparatively uneventful. The abolition of slavery in 1838 caused an economic and social change, and the outbreak of Civil War in the United States led to a period of considerable prosperity in the Bahamas which, between the years 1861 and 1865, were used as a depot for the vessels which were running the "blockade" imposed against the Confederate States. During the Great War, in spite of the distance of the Bahamas from the scene of the conflict, the inhabitants suffered some hardship from the difficulty of obtaining food supplies. The Colony sent a contingent to the British West Indies Regiment and contributed liberally to the Red Cross and other funds.

13. In 1919 there was a sudden increase in the revenue of the Colony, due to large imports of spirits, which reached a record in 1922 and has since gradually declined.

14. The Bahamas has shared in the depreciation of land values experienced in Florida during the past two years, by the collapse of the real estate "boom," and, although prices of property have not returned to normal, there is very little activity in real estate at present. No doubt the tourists will still continue to acquire sites for their winter homes in the Bahamas, but it seems improbable that there will be any return to the abnormal activities previously experienced in the sale of real estate.

15. Owing to its many natural facilities for the tourist traffic, Nassau each year attracts an ever increasing number of winter visitors during the Season, which is from the end of December to the beginning of April. The Bahamas can boast of an unsurpassed winter climate, and the tourists who visit the Colony have many forms of sport to indulge in, including swimming, fishing, yachting, tennis, and golf. There are three first-class hotels open for visitors during the winter season.

16. British gold and silver coins are legal tender in the Colony, but there is a large quantity of United States currency and British currency notes in circulation. The Bahamas Government has issued local currency notes of three denominations—20s., 10s., and 4s.—and £110,000 worth of these notes are now in circulation. English weights and measures are in use.

## II.—GENERAL.

17. The present constitution of the Bahamas is similar to those of the North American Colonies prior to the War of Independence. The Government is modelled upon that of England, the Governor representing the Sovereign, the nominated Legislative Council and the elected House of Assembly representing respectively the Houses of Lords and Commons.

18. "The Eleutherian Adventurers" who came to the Bahamas from Bermuda after the Parliamentary grant of 1647, brought with them the idea of representative Government which already existed in Bermuda, and the affairs of the infant settlement were managed by a Governor, a Council, and an elected Senate. The charter of 1670 to the Lords Proprietors provided for an elected House of Assembly, and the constitution, much as it exists to-day, was finally settled in 1729 when the Crown assumed direct control of the Colony. The Bahamas enjoy representative, though not responsible, Government. The Executive Government is in the hands of a Governor and Commander-in-Chief, appointed by the Crown, who has a negative voice in legislation. He is assisted by an Executive Council not exceeding nine members; the Colonial Secretary, Attorney-General, and Receiver-General are members

*ex-officio*, the other members being, as a rule, selected from one or other of the two branches of the Legislature. Various executive powers and the right to enact certain subsidiary legislation are vested by law in the Governor in Council.

19. The Legislative Council consists of nine members nominated by the Crown. It has the right to initiate legislation (other than money bills) and to amend bills passed by the House of Assembly (other than money bills). It may throw out altogether any bills, even those dealing with money. In 1924 the Legislative Council rejected a bill for the reduction of the duty on spirits, which had passed the House of Assembly by a narrow majority.

20. The House of Assembly is composed of 29 members, elected for 15 districts, the qualification for members being possession of real or personal property to the value of £200. The Out Islands seldom return a member of their own community, their 21 representatives being generally inhabitants of New Providence. The qualification for electors is the ownership of land of the value of £5 or the occupation of houses of an annual rental value of £2 8s. in New Providence or half that amount in the Out Islands. Women have not the vote. The life of the House is seven years unless previously dissolved by the Governor.

21. At the General Election which took place in May and June, 1925, 18 out of the 29 members were returned unopposed. The following table shows the number of electors who voted at the contested elections:—

Constituency.	No. of seats.	No. of unsuccessful candidates.	No. of Votes cast for elected candidates.	No. of Votes cast for unsuccessful candidates.	Population at 1921 Census.
New Providence (South) (a) ... ..	2	—	195	—	3,500 (approx.)
	—	—	175	—	
	2	1	—	119	2,000 (approx.)
New Providence (East) (a) ... ..	—	—	252	—	
	—	—	241	184	2,773
	—	2	—	142	
Harbour Island (b) (electoral district) ... ..	3	—	339	—	5,025
	—	—	337	—	
	—	—	333	—	3,458
	—	1	—	183	
Long Island (a) (with Ragged Island) ... ..	2	—	305	—	937
	—	—	257	—	
	—	1	—	115	
Crooked Island (with Long Cay and Acklin's) ... ..	1	—	93	—	
	—	—	—	—	
	—	1	—	78	
Inagua ... ..	1	—	31	—	
	—	1	—	29	

(a) Each elector had two votes.

(b) Each elector had three votes.

22. The Crown owns a considerable amount of land in the various islands and the receipts from the sale and leases of these Crown lands are placed to the credit of a special fund which is administered by the Governor under the direction of the Secretary of State for the Colonies. The receipts amounted to £17,590 in 1926, and to £7,237 in 1927.

23. Apart from these Crown funds, the House of Assembly has complete control over the finances of the Colony, subject to the veto of the Legislative Council and the Governor. This control is jealously exercised, and by voting sums to a number of Boards composed largely of members of the Legislature the House exercises a certain measure of executive power.

24. The policy of the Government, as expressed by the Governor in his Address at the opening of the Legislature on the 8th November, 1927, may be summarised as follows:—firstly, the encouragement of agriculture and the development of the sponge industry; secondly, the development of the islands as a health and pleasure resort; thirdly, the improvement of communications in, and with, the outlying islands; and fourthly, the resolute prosecution of the policy of developing island by island on a carefully considered plan.

### III.—FINANCE.

25. Totals of revenue and expenditure for the last five years were as follows:—

				<i>Revenue.</i>	<i>Expenditure.</i>
				£	£
1922-23	...	...	...	852,573	377,164
1923-24	...	...	...	553,375	452,044
1924-25	...	...	...	414,314	409,970
1925-26	...	...	...	502,202	374,126
1926-27	...	...	...	531,235	474,653

26. The revenue in 1913-14 was £100,753, and in 1918-19 it had sunk to £81,049. The estimated revenue for the current year (1927-28) is £483,777, and it is probable that this amount will be realised.

27. There was an excess of assets over liabilities at the end of March, 1927, of £1,052,312. Of this sum, £476,516 was invested in England in trustee securities bearing interest at approximately 5 per cent. £443,346 of the assets represent loans at 3 per cent. interest to the New Colonial Hotel Company and the Golf Course Company; and £220,000 to the Waterloo Hotel Company at 4 per cent.

28. The Public Debt at the same date amounted to £154,105, the whole of this amount having been raised locally by debentures. Provision is made by law for an annual contribution from the general revenue of the Colony to a sinking fund for the redemption of these debentures as they fall due.



29. During the past few years the cost of extensive public works has been successfully met from ordinary revenue. There are now, however, very heavy commitments for harbour works and a water supply and sewerage scheme for Nassau, and it will shortly be necessary either to raise a loan or to draw on surplus funds. In anticipation of the former alternative being decided upon, the Legislature has recently passed a General Loan and Inscribed Stock Act, which will permit of the Colony taking advantage of "The Colonial Stock Act, 1877" and raising a loan in England.

#### IV.—PRODUCTION.

30. *Agriculture*.—Tomatoes, pine-apples, and sisal hemp are the chief agricultural products of the Bahamas. Years ago pine-apples were exported in great quantities, but, owing to the deterioration of the stock and the failure of the soil, very few are now grown. The tomato industry, which has only been introduced into the Bahamas during the last few years, is rapidly growing and promises to replace that of the pine-apple. The sisal hemp, which is mostly cleaned by hand, is a great help to the Out Islands peasant and tides him over many hard times.

31. Citrus fruit used formerly to be grown in great quantities, but, owing to the invasion of the blue-gray fly, instead of exporting a great deal as previously not enough is now produced to meet the local demand. The Government and the Board of Agriculture are doing their utmost to revive this and other forms of fruit culture, and there are already signs that the agriculture campaign that has been inaugurated will result in a large increase in the growth throughout the islands of cereals, fruit, and vegetables.

32. *Forestry*.—The Colony is sub-tropical and both northern and tropical plants exist, the pine tree and the palm growing literally side by side. On several of the islands there are extensive areas of pine forests growing on land which is generally rocky and unsuited to agriculture, such land being commonly referred to by the suggestive name of "pine barren." The pine trees are suitable for conversion into lumber, and the whole of the forests are already let on licence to private firms, who pay a royalty on all timber obtained. There are five such timber concessions or licences, which together cover an area of 473 square miles, but active work is at present being carried out on only two of the areas.

33. Other woods of commercial value are found in limited quantities, and a small export trade is carried on in *lignum vitae* and logwood. Sabicu, locally known as "horseflesh," is found, and the supply is consumed locally. There are also small quantities of Madeira and cedar.

34. There is a steady demand for cascarilla bark. The shrub grows wild on the southern islands of the Group, the best quality

being found on Atwood's Cay. Experimental plots have been planted, and it is hoped to increase the supply by the cultivation of large acreages.

35. *Fisheries*.—There are quantities of excellent fish in the waters of the Colony, but there is no fishing except for local consumption. There was formerly some trade in bêche-de-mer, which was exported to China, but this trade has practically disappeared. Turtle shell is exported, and there is a fairly large trade in conch shells; the cameo of commerce is manufactured from the lip of this shell.

36. Perhaps the principal industry of the Colony is sponging. Sponges are found in great quantities in all shallow waters of the Bahamas, especially around the islands of Andros, Abaco, Exuma, Acklin's, and Eleuthera. A large number of small vessels is employed on this work, the sponges being hooked up from the bottom by the crews of these vessels. Important experiments are being carried out by the Agricultural and Marine Products Board in the planting of sponges to suit the market and to improve the quality. Extensive experiments have been conducted by an expert employed by the Imperial Government.

37. *Salt*.—A good supply of coarse salt known as "kitchen" salt is produced in ponds at Inagua, Rum Cay, and Ragged Island, and a small quantity exported.

38. The shortage of food caused by the hurricanes of 1926 was accentuated by a severe drought in 1927 which destroyed practically all the crops in the southern islands of the group. A determined effort is now being made to induce the people to return to the soil and increase the area under cultivation.

39. The following table gives the quantity and value of each of the principal articles of local produce exported from the Colony during the past five years:—

		1923.	1924.	1925.	1926.	1927. (Approx.)
Cascarilla Bark	{ lb.	21,433	15,453	86,578	28,554	31,841
	{ £	748	547	4,183	1,606	1,459
Tomatoes, raw ...	{ M					
	{ Bushels	145	117	57	106	214
	{ £	39,245	37,388	16,710	26,516	92,497
Sisal Hemp ...	{ Tons	1,823	1,808	2,264	1,693	596
	{ £	38,381	37,830	52,137	40,082	10,632
Abaco Pine Timber ...	{ M feet	5,193	6,302	11,349	9,052	8,082
	{ £	29,329	35,937	61,576	48,958	49,854
Woods, other ...	{ Tons	183	84	108	127	76
	{ £	958	281	349	600	335
Shell, Tortoise ...	{ lb.	4,922	7,812	10,449	6,463	7,740
	{ £	9,267	18,243	23,350	12,093	13,421
Shell, Conch ...	{ No.	36,688	68,000	21,000	5,000	29,000
	{ £	933	268	179	365	225
Sponge ...	{ M lb.	1,073	1,490	1,655	1,532	959
	{ £	113,300	131,618	149,820	134,234	109,203

## V.—TRADE AND ECONOMICS.

40. The general trade of the Colony is still feeling the effects of the three hurricanes of 1926 and the collapse of the real estate boom. The value of imports in 1927 was £204,282 less than in 1926, but there was an increase of £77,502 in the value of exports.

41. By referring to the statistics of the Colony it will be seen that imports from the United Kingdom have decreased from £758,041 in 1925 to £438,424 in 1927; whilst imports from the United States have decreased from £1,070,374 in 1923 to £778,894 in 1927.

On the other hand, imports from Canada have increased from £160,610 in 1923 to £401,224 in 1927. With regard to exports, trade with the United Kingdom has decreased from £39,483 in 1923 to £31,009 in 1927.

42. The total value of the trade of the Colony for the past five years has been as follows :—

	1923.	1924.	1925.	1926.	1927. (Approximate.)
	£	£	£	£	£
Imports ... ..	2,120,136	1,553,143	1,760,987	2,059,755	1,855,475
Exports ... ..	1,835,051	626,353	481,352	406,271	483,773
Total (excluding specie)	3,955,187	2,179,496	2,242,339	2,466,026	2,339,248

43. The value of the imports from the three principal countries of origin for the same period was as follows :—

	1923.	1924.	1925.	1926.	1927. (Approximate.)
	£	£	£	£	£
Great Britain ... ..	758,041	507,459	560,794	525,625	438,424
Canada ... ..	160,610	173,181	240,295	462,273	401,224
United States of America	1,070,374	747,636	785,286	880,645	778,894

44. The values of the principal classes of articles imported were as follows :—

	1923.	1924.	1925.	1926.	1927. (Approximate.)
	£	£	£	£	£
Spirits ... ..	1,010,098	591,040	637,311	750,448	614,362
Wines ... ..	65,858	29,581	38,423	44,688	38,826
Cordials and Liqueurs ...	12,513	7,606	9,378	9,871	11,664
Salt ... ..	28,332	33,602	59,334	45,680	32,412
Tobacco, cigars and cigarettes...	22,949	22,682	22,133	24,787	14,298
Foodstuffs ... ..	314,535	307,280	322,585	406,896	20,549
Lumber and shingles ...	37,538	26,513	38,791	55,024	52,990
Boots and shoes ... ..	19,945	21,683	19,523	33,560	23,344
Cotton manufactures ...	87,080	79,150	93,870	102,484	61,544
Metals, iron and steel, manu- factures of ... ..	44,534	80,141	54,899	59,047	73,303
Oils ... ..	32,551	42,634	43,374	59,972	65,462
Motor-cars, trucks, and parts of	16,149	16,966	32,566	40,097	26,237

45. Of local produce<sup>3</sup>, the whole of the exports of tomatoes and Bahamas hemp go to the United States of America, while the exports of sponge go chiefly to United States of America, United Kingdom, France, and Germany; lumber is exported to Cuba and turtle shell to the United Kingdom.

46. Trade with the United Kingdom is hampered considerably by difficulties of communication. There is no direct mail service, and the cargo steamers take about three weeks from England to the Bahamas and still longer on the return journey. New York, on the other hand, is less than three days by steamer from the Bahamas, and the ports of Florida are within a few hours' steam. In these circumstances it is not remarkable that there should be a close trade relationship between the Bahamas and the United States. There is a little trade with Jamaica and Bermuda, with which places there is direct communication; but, as a result of the recent Trade Agreement between Canada and the West Indies, the volume of trade with the Dominion is steadily increasing, particularly as regards importations of flour, sugar, oats, and potatoes. The decrease of imports from Canada in 1927 as compared with the previous year is due to the general depression, and in no way affects the prospects of trade between Canada and the Bahamas, which are extremely hopeful, provided that Canadian exporters will send competent salesmen to the Colony to push the sale of their products.

47. There are several wholesale houses dealing in provisions and dry goods. One New York commission house has an agent in Nassau and keeps in stock a supply of flour, rice, hominy, and meal. The majority of the stores import direct either from the United States of America or the United Kingdom.

#### VI.—COMMUNICATIONS.

48. In 1927, 1,268 steamers and sailing vessels, of a total of 678,482 tons, entered at the ports of the Colony, principally at Nassau. There is a monthly freight service from England via Bermuda by the steamers of the Leyland and Harrison Lines. There is a weekly passenger and freight service during the winter months, and during the summer a fortnightly service from and to New York by the steamers of the Munson Line, which are under contract with the Government. A subsidy is paid to the steamers of the Canadian Government Merchant Marine, which call every three weeks on their voyage from a Canadian port to Bermuda, Nassau, Jamaica, and British Honduras; the steamers also call at Nassau on their return trip northwards. There is a frequent communication between Nassau and Miami, Florida. Vessels of the Royal Mail Line also call at Nassau.

49. Communication with the Out Islands is maintained by sailing vessels and motor-boats, but, owing to the class of boat employed, the voyages are uncomfortable and unreliable.

50. There are numerous lighthouses on the various islands, some maintained by the Imperial Board of Trade and the others by the Bahamas Government. The waters of the Colony are full of shoals and rocks and navigation is difficult.

51. *Roads.*—In the Out Islands there is little wheeled traffic and the roads are scarcely more than paths in some instances. In New Providence, on the other hand, there are good roads and a considerable number of motors and carriages, over 900 motor vehicles being licensed. During recent years the roads in New Providence have been greatly improved; most of the roads in the city have been oiled, and the main country roads east and west of the city have been rebuilt and oiled for a number of miles.

52. Road construction at the Out Islands is being concentrated on the island of Eleuthera at present, where the Government proposes building a road suitable for motor traffic through the island for a distance of about 70 miles, with the view to developing the island agriculturally. About 35 miles of road have already been completed.

53. *Post Office.*—The various postal services have been well maintained. The cash-on-delivery system is in force in New Providence. Mails to and from the United Kingdom pass through New York.

54. *Telegraphs.*—The telegraph cable service to Florida was abandoned some years ago, owing to the difficulties of keeping the cable in repair, and the wireless service then instituted has proved a complete success. The service now comprises a central station of five kilowatts power spark and  $1\frac{1}{2}$  kilowatts, continuous wave, at Nassau, and nine stations of half or one kilowatt power and eight smaller stations each of 100 watts, continuous wave, at various Out Islands. The latter stations have proved of great benefit to the industries of the islands, and are very useful for administrative purposes. The Nassau station has operated throughout the year without any interruption and has handled a considerable amount of traffic, as many as 400 messages being exchanged in one day with a station in Florida.

55. *Telephones.*—There is a telephone system, with 950 subscribers, in New Providence. All the main settlements of Eleuthera, Cat Island, and Long Island are also connected by telephone.

## VII.—JUSTICE, POLICE, AND PRISONS.

56. The law in force in the Colony consists of the Common Law of England as it existed at the time of the settlement, certain applied Acts of the Imperial Parliament, and the Acts passed by the local Legislature. The Supreme Court is presided over by a Chief Justice; appeals from the Supreme Court lie to the Judicial Committee of the Privy Council. There is a Stipendiary Magistrate



in Nassau, who goes on circuit annually in the Out Islands to try appeals from the decisions of the Commissioners in charge of each district.

57. There is an armed police force, consisting of 125 rank and file, with four officers. Most of the Force is stationed in Nassau, police work in the Out Islands being in the hands of local constables.

58. There is a central prison in Nassau, to which all long-term prisoners from the Out Islands are committed.

#### VIII.—PUBLIC WORKS.

59. Work was begun on the dredging of Nassau Harbour in 1923, and is now approaching completion. By the end of March, 1928, a turning basin, twenty-five feet deep at low-water, and measuring about 850 feet wide and some 1,500 feet in length, will be completed in the harbour, and will be connected with the open sea by a channel of the same depth and 250 feet in width. The construction of a wharf, fronting on the turning basin, was begun during the year and will shortly be completed. It is estimated that a sum of about £390,000 will have been expended on these works when they are completed.

60. A water supply scheme for the city of Nassau, estimated to cost £120,000, was begun in April last; progress on the work has been so rapid that water has already been supplied to householders in some districts and it is anticipated that the work will be completed within the next three months.

61. Work was also begun, towards the end of the year, on a water-borne sewerage system for Nassau, the estimated cost of which is £150,000. It is hoped that this work will be completed by the 31st March, 1929.

#### IX.—PUBLIC HEALTH.

62. Owing to the occurrence of some cases of typhoid fever in the spring of 1927, and the importance of maintaining the high reputation of the Bahamas as a health resort, it was decided to obtain the advice of a sanitary expert: Major-General Sir Wilfred Beveridge, K.B.E., C.B., D.S.O., late Director of Hygiene at the War Office, accordingly visited the Colony in September last, and his report is now under consideration.

63. Apart from the occurrence of typhoid, which was of a very mild type (one of the paratyphoid group), with an extremely low mortality rate, the general health of the community during the past year has been good. Malaria is not common in Nassau, the *Anopheles* mosquito being found only in the Western district of New Providence and Hog Island, though they are fairly abundant in several of the Out Islands.

## X.—EDUCATION.

64. Primary education is compulsory for children between the ages of six and fourteen years, and is provided free by the Government. In 1926-27 a sum of £28,000 was expended from public funds on primary education under the direction of the Board of Education, a body nominated by the Governor.

65. There are now seven Government and grant-in-aid primary schools in New Providence (population 13,000) and 100 in the Out Islands (population 40,000). At first sight the number of schools seems adequate, but it must be remembered that there are so many islands, and the settlements on these islands are so scattered, that a great many children are not within reach of a school. Many of the children who do attend have to walk long distances in great heat and along bad roads to get to their schools; to at least one school, children come in boats, managed by themselves, from neighbouring "cays."

66. The chief handicap of education, however, is the shortage of efficient teachers. The lonely life on the Out Islands, and the comparatively small salary, does not attract the best type of man, and probably not half of the teachers in the Out Islands could be described as competent. There are very few assistant teachers and in a large school the teacher is forced to depend on the help given him by "monitors," who, in many cases, are almost as ignorant as the pupils they try to teach. The Government is alive to the seriousness of the situation, and during the year 1925 a Government High School was started in Nassau to train teachers and to provide a secondary education for those who can afford to pay the small fees charged. The Board of Education has secured the services of five teachers from England, who have been stationed at the Out Islands with a view to raising the standard of education.

67. Apart from the Government High School referred to, secondary education is in the hands of the various religious bodies, but up to the present even secondary education has not reached a very high standard.

## XI.—LANDS.

68. The total area of the Colony is estimated at about 4,400 square miles, and of this area only 596½ square miles have been alienated, and are now in private hands, in addition to the 430 square miles of Grand Bahama which is being leased to the Grand Bahama Mercantile and Development Company, Limited. The large area still remaining to the Crown is chiefly comprised of swamp and rocky and barren land, as the land most suitable for agriculture was acquired long ago by private persons.

69. The present policy of the Crown is not to sell lands outright but to rent on a tenancy until such time as the tenant has effected permanent improvements, either by building or agriculture, when an application for a grant in fee simple would be considered. During the year 1927 eighty-three Crown land grants have been issued for a total area of 878 acres.

70. The value of all land has considerably increased, especially on the island of New Providence, on which Nassau, the capital of the Colony, stands. The vacant Crown land on New Providence is of little value for agriculture, but the island has developed so rapidly as a tourist resort that the land is greatly in demand.

71. Crown land in New Providence is sold by auction at an upset price fixed according to value, and deferred payments are allowed. On the small outer islands of the Colony leases are granted with the right to purchase if an island is permanently improved. On the larger islands, if extensive tracts are sold, special terms are arranged.

## XII.—LABOUR.

72. The lack of remunerative industries in the Out Islands has, in the past, caused a steady flow of emigration to Florida, and many of the islands were being steadily depopulated. The new United States immigration law, which came into force in 1914, put an abrupt stop to this movement of the population, but, owing to the large amount of work put in hand by real estate developers and builders, there was ample employment for all until towards the end of 1926, and the price of labour was very high. In 1925-26 ordinary unskilled labour, of poor quality, was paid at the rate of 5s. to 6s. a day, while carpenters and masons drew four times as much. During the last twelve months, however, there has been a great deal of unemployment and the cost of labour has been considerably reduced.

73. Owing to the uncompromising nature of the soil and the difficulty of transporting their crops to Nassau, there is very little money to be made by agriculturists in the Out Islands, and the people have, in recent years, flocked to Nassau for employment. The temporary set-back to the prosperity of the Colony, caused by the three disastrous hurricanes of 1926 and the slump in real estate development, will probably prove to be a blessing in disguise, as the people are realising the advisability of industries more stable than those they have depended upon in the past, and are turning, in their need, to agriculture.

## XIII.—MISCELLANEOUS.

74. During the year an Act was passed to provide for an annual contribution to the expenses of the Standing Conference of British Guiana, British Honduras, the Bahama Islands, and the British West Indian Islands, the Legislature thereby sanctioning the adherence of the Bahamas to this Conference.

75. Another Act passed during the year prohibited the importation of whiskey or brandy less than three years old.

76. Perhaps the most interesting event of the year was the opening of the new harbour constructed by private enterprise at Hatchet Bay, in the island of Eleuthera. A large pond has been connected with the sea by a canal cut through the solid rock for a distance of forty yards, and, when the work has been completed, will afford safe anchorage for vessels drawing up to twenty feet. The company engaged on this development proposes to export limestone, which is found there in particularly rich quality, and to extend its activities in other directions.

77. Banking interests are represented in the Bahamas by the Royal Bank of Canada, which has a branch at Nassau. There is a Government Savings Bank, worked by the Post Office Department.

78. Major C. W. J. Orr, C.M.G., succeeded Sir H. E. S. Cordeaux, K.C.M.G., as Governor during the year. Major Orr assumed office on the 15th March, 1927.

A. C. BURNS,  
*Colonial Secretary.*

NASSAU,

9th January, 1928.



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No. 1379.

## Bechuanaland Protectorate.

### REPORT FOR 1926-27.

*(For Report for 1924-25 see No. 1269 (price 9d.), and for Report  
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## BECHUANALAND PROTECTORATE.

### ANNUAL GENERAL REPORT FOR THE YEAR 1926-27.

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#### I.—HISTORICAL AND GEOGRAPHICAL.

*Proclamation of British Protectorate.*—During the year 1885 Sir Charles Warren, who was in command of an expedition despatched from England to pacify Southern Bechuanaland, where for some time previously hostilities had been proceeding between the Bechuana and Boers from the South African Republic, visited the principal Chiefs in Northern Bechuanaland (known as the Bechuanaland Protectorate), namely, Khama, Gasietsiwe, and Sebele, and as a result a British Protectorate was proclaimed over their territories. No further steps were taken until the year 1891, when, by an Order in Council, dated the 9th May, the limits of the Bechuanaland Protectorate were more clearly defined, and the High Commissioner for South Africa was authorised to appoint such officers as might appear to him to be necessary to provide for the administration of justice, the raising of revenue, and generally for the peace, order, and good government of all persons within the limits of the Order. Sir Sydney Shippard, the Administrator of Bechuanaland, was appointed Resident Commissioner. An

Assistant Commissioner was also appointed for the Southern Protectorate and another for the Northern Protectorate, the laws in force in the Colony of the Cape of Good Hope on the 10th June, 1891, being declared in force in the Territory, *mutatis mutandis*, and so far as not inapplicable. Subsequent legislation has been effected by Proclamation of the High Commissioner.

*Relations with the British South Africa Company.*—For fiscal and other purposes the Protectorate was treated as a portion of the Crown Colony of British Bechuanaland until the 15th November, 1895, when the latter was annexed to the Cape Colony. In the autumn of that year arrangements were made for the transfer of the administration of the Bechuanaland Protectorate, with the exception of certain reserves for native Chiefs, to the British South Africa Company. The country occupied by the Bamalete tribe, and so much of the Bora-Tshidi Barolong country as lies within the limits of the Protectorate, were transferred to the administration of the British South Africa Company, Dr. L. S. Jameson being appointed Resident Commissioner therefor. The Company's police were moved down to a camp in the Protectorate, at Pitsani Potlugo. From that spot, on the 29th December, Dr. Jameson crossed the border of the South African Republic with his police, and marched towards Johannesburg, which was at that time in a state of great unrest. Being defeated by the Boers at Doornkop, he surrendered on the 2nd January, 1896. In consequence of this raid, the administration of the two areas above referred to was retransferred to the British Government, by whom the Protectorate, in its entirety, is still governed under the name of the Bechuanaland Protectorate. It includes the Tati District, which is a portion of old Matabeleland conceded in 1887, by Lobengula, to Mr. S. H. Edwards.

*Proclamation of Crown Lands.*—In 1895 the Chiefs Khama, Sebele, and Bathoen visited England, and each of them abandoned all rights and jurisdiction in and over certain portions of his former territory. The lands thus abandoned by them were, by Order in Council dated the 16th May, 1904, declared Crown Lands, and all rights of His Majesty in or in relation thereto were vested in the High Commissioner for South Africa, who was empowered to make grants or leases of such land on such terms and conditions as he might think fit, subject to any directions received from one of His Majesty's Principal Secretaries of State. Title to portions of this land on the eastern border of the Protectorate was subsequently granted to the British South Africa Company, subject to certain reservations, and these lands are now known as the Tuli, Gaberones, and Lobatsi Blocks of farms.

By virtue of the Order in Council dated the 10th January, 1910, all other land situate within the limits of the Bechuanaland Protectorate, elsewhere than in the Tati District, was, and still is.

vested in His Majesty's High Commissioner for South Africa, subject to all the provisions of the Order in Council of the 16th May, 1904, and to the following exceptions :—

(1) Such land as is either :—

(a) included in any native reserve duly set apart by the Proclamation ; or

(b) the subject of any grant duly made by or on behalf of His Majesty ; and

(2) the forty-one farms known as " The Barolong Farms," held by members of the Barolong tribe by virtue of certificates of occupation issued by the Chief Montsioa on the 28th March, 1895.

*Later developments.*—During the period 1896-97, the existing railway line connecting the Union of South Africa with Rhodesia was constructed by the Bechuanaland Railway Company, authorised thereto by High Commissioner's Proclamations.

In 1898 a limited number of farms were allotted at and in the neighbourhood of Ghanzi, in the north-western corner of the Protectorate, to settlers, some of whom had trekked there as prospectors in 1894.

In 1899 the boundaries of the Bamangwato, Batawana, Bakgatla, Bakwena, and Bangwaketsi native tribes were established and defined by Proclamation, and in 1909 the boundaries of the Bamalete native reserve were similarly fixed.

In 1911 the Tati Concessions, Limited, and its successors and assigns were confirmed by Proclamation No. 2 of 1911 in the full, free, and undisturbed possession as owners of all the land within the Tati District, subject to all the terms and conditions of the said Proclamation, certain lands being assigned as a reserve for the occupation of natives. This reserve is under the control of the Government. The natives residing within it hold and occupy the land included therein, subject to such rules and regulations as are from time to time proclaimed by the High Commissioner ; and, subject to certain conditions safeguarding the interests of the natives, the Company (now the Tati Company, Limited) retains the mining rights (including precious stones) over this native reserve.

*Boundaries.*—The territory of the Bechuanaland Protectorate is bounded on the south and east by the Union of South Africa, on the north-east by Southern Rhodesia, on the north and on the west by the territory of South West Africa.

It has not been surveyed as a whole, but its area is estimated at 275,000 square miles. Its mean altitude is about 3,300 ft.

In view of the geographical position of that part of the mandated territory of South West Africa east of longitude 21° E., known as the Caprivi Strip, it was found expedient to provide in 1922 that

the latter should be administered as if it were a portion of the Bechuanaland Protectorate.

The Bechuanaland Protectorate is divided for administrative purposes into the following Districts, with a Resident Magistrate at the head of each :—

N'gamiland (Headquarters Mauñ).  
 Chobe (Headquarters Kasane).  
 Ngwato (Headquarters Serowe).  
 Gaberones (Headquarters Gaberones).  
 Lobatsi (Headquarters Lobatsi).  
 Ghanzi (Headquarters Gemsbok Pan).  
 Francistown (Headquarters Francistown).  
 Tuli Block (Headquarters Selika).  
 Kweneng (Headquarters Molepolole).  
 Ngwaketsi (Headquarters Kanye).  
 Kgalagadi (Headquarters Lehututu).

In addition the Assistant Resident Commissioner is Chief Magistrate for the Protectorate, and, as such, has all the powers of an Assistant Commissioner or Resident Magistrate throughout the Territory.

## II.—GENERAL EVENTS OF THE YEAR.

At the beginning of August His Excellency the High Commissioner, who was accompanied by Her Royal Highness Princess Alice, Countess of Athlone, Viscount Trematon, and Lady May Cambridge, also the Imperial Secretary and Mrs. Clifford, paid his first visit to the Territory. His Excellency and Her Royal Highness were received by the Acting Resident Commissioner (Lieutenant-Colonel R. M. Daniel) and the Government Secretary at Lobatsi, where the European residents of the District, headed by the Resident Magistrate and Mr. R. Transfeldt, Member of the European Advisory Council, were presented. Mr. Transfeldt read an Address of Welcome to which His Excellency briefly replied. The school children and Girl Guides were then received and reviewed by His Excellency and the Princess. On reaching Gaberones the Acting Resident Magistrate, the Resident Magistrate of the Kweneng District, the Resident Magistrate of the Ngwaketsi District, the local members of the European Advisory Council (Mr. B. I. Vickerman and Mr. L. S. Glover), and other European inhabitants were presented. His Excellency also here received the Indians of the Southern Protectorate, who presented an Address of Welcome to which His Excellency replied. It had been arranged that the Chiefs of the Southern Protectorate should meet the High Commissioner on the Government Reserve, three miles distant, and there in the presence of some hundred representatives of the six tribes Lord Athlone gave impressive replies to the several Addresses. Her Royal Highness subsequently added a charming incident to

the programme by expressing her desire for a conversation with Ntebogani, Chieftainess of the Bangwaketsi, as the one woman ruler in South Africa.

On reaching Palapye Road the High Commissioner had presented to him the local inhabitants headed by Mr. H. C. Weatherilt, who represents the Tuli Block on the European Advisory Council, and then motored to Serowe, 36 miles distant, where he was received by the Resident Magistrate and the Acting Chief of the Bamangwato, Tshekedi, youngest son of the Chief Khama. The native reception was brilliantly enhanced by the attendance of the various native regiments in full dress. The six-year-old Chief Seretse, only surviving son of the late Chief Sekgoma, faced His Excellency in the Chair, Tshekedi and Khama's widow Semane standing immediately behind surrounded by the Councillors, most of them in uniform. After a few introductory words of welcome by Tshekedi, the Bamangwato Address was read by one of the Councillors. His Excellency's reply, after commending to Tshekedi the examples of Khama and Sekgoma, confirmed Tshekedi in his position as Regent and Acting Chief during Chief Seretse's minority, so long as he served the Tribe faithfully and conformed to the laws of the Protectorate. His Excellency then made the following important declaration :—

“ It has been stated that the Masarwa are the slaves of the Mangwato. The Government does not regard them as slaves, but realises that they are a backward people who serve the Mangwato in return for the food and shelter they receive. I understand that for the most part they are contented and that they do not wish to change. But the Government will not allow any tribe to demand compulsory service from another and wants to encourage the Masarwa to support themselves. Any Masarwa who wish to leave their masters and live independently of them should understand that they are at liberty to do so and that if the Mangwato attempt to retain them against their will the Government will not allow it. It is the duty of the Chiefs and Headmen to help these people to stand on their own feet and I expect the missionaries and the Chief and his Councillors to join the Government in preventing anything in the nature of compulsory service in Bechuanaland.”

His Excellency's speech was well received by the natives, the missionaries, and the European residents of the Bamangwato Reserve generally.

His Excellency afterwards conversed with the young Chief Seretse, and Her Royal Highness with Semane. Luncheon was eaten at a picturesque spot about a mile outside Serowe and there the local European residents, with the Acting Resident Magistrate of the Tuli Block, were presented.

During the afternoon His Excellency found good shooting on the easternmost of the Serowe hills. On the next morning Francistown was reached, where the Resident Magistrate, the General Manager of the Tati Company, and Mr. James Haskins met the distinguished visitors at the station. The formal presentation of the European inhabitants took place on the cricket-ground, where His Excellency replied to an Address and then he and Her Royal Highness conversed with the settlers. The four native tribes of the District greeted the High Commissioner at the Court House, the aged Chief Samuel Moroka, exiled from the Orange Free State 40 years ago and educated at St. Augustine's College, Canterbury, being an interesting figure. Everywhere on this tour the natives had given moving evidence of their loyalty to the Throne and the Government, and here this was expressed in a remarkable piece of blank verse composed by the native school teacher and recited by one of the boys, who carried a small Union Jack on a long pole, to which he continually pointed by way of emphasis.

The natives here entertained the High Commissioner, the Princess, and party by some fine native dancing.

The last place of call on the tour was Tsessebe where the local farmers and other residents had prepared a delightful tea. Here again Lord Athlone and Princess Alice spent over an hour talking to everyone in turn. When the train left, much behind the scheduled time, Mr. McFarlane, Member of the European Advisory Council, led rousing cheers for their visitors.

Later in the month the High Commissioner, Princess Alice and their two children and their staff spent three weeks in a shooting camp on the Chobe in the Caprivi Strip.

### III.—FINANCIAL.

The estimated revenue for the year 1926-27 was £100,450; the actual amount collected was £131,568, or £31,118 more than the estimate, which constitutes a record in the history of the Territory.

With the exception of the amount collected under the heading Judicial Fines—a fluctuating revenue difficult to estimate—increases are shown under every heading, both over the estimated figures for the year under review, and also over the amounts collected under those headings for 1925-26. Of these increases, those under the headings Hut Tax, Income Tax, and Posts are particularly large, amounting to £2,312, £6,554, and £9,550, respectively, over the collections of the previous year, the last consisting mainly of transit dues received from the United Kingdom, the Belgian Congo, and Mozambique, in respect of the year 1924-25, this being an item subject to very large fluctuations owing to the payments in respect of the different countries not being made simultaneously.

The estimated expenditure for 1926-27 was £109,914, and the actual expenditure amounted to £108,222, or £1,692 less than the estimate.

#### IV.—TRADE, AGRICULTURE, AND INDUSTRIES.

The natives of the Bechuanaland Protectorate are mainly engaged in cattle rearing. The distribution, among the various tribes, of pure-bred bulls and cows purchased out of a fund maintained by the natives themselves, and the restriction of cattle exportations to the Union of South Africa to a certain weight of animal, have contributed in different ways to the improvement of native stock. For veterinary reasons the export of cattle to the Union is further restricted to consignments intended for approved abattoirs and (without restriction as to weight) for export overseas, while to South West Africa and Southern Rhodesia it is absolutely prohibited. Subject to authorization from the *Inspecção dos Servicos Veterinarios* in Loanda being previously obtained, there is unrestricted export of cattle to Angola. There is also unrestricted export through Northern Rhodesia to the Belgian Congo except that, in order to conserve the grazing in the quarantine camp on their side of the border, the Government of Northern Rhodesia require that cattle so exported shall not exceed a fixed number in one year, and such cattle are only admitted by the Belgian authorities, and consequently by Northern Rhodesia also, if they are certified by a qualified veterinary surgeon as being themselves clean and as coming from an area which is free from transmittable disease. As a result of all these restrictions, some of which are of recent imposition, the cattle trade is not yet as flourishing as it might be.

A Conference was held at Livingstone in March, 1926, between the Principal Veterinary Officers of the Belgian Congo, Northern and Southern Rhodesia, and the Bechuanaland Protectorate and the outcome of their deliberations was that the export through Northern Rhodesia to the Belgian Congo of cattle from the Bechuanaland Protectorate was entirely prohibited unless the Protectorate veterinary authorities certified that the cattle were themselves clean and that the area from which they came had been free from transmittable disease for at least six months prior to export therefrom. Another condition was a report by a Veterinary Officer on the tsetse fly belt through which the cattle proceeding to the Northern Rhodesian border must pass. This decision necessitated a Government Veterinary Officer being stationed in N'gamiland, whose duties were to examine the herds in the whole of that District and in the eastern portion of the Caprivi Strip, an area comprising altogether some 50,000 square miles. The embargo was lifted on 17th June, as regards cattle waiting at Kazungula to cross the Zambesi; this special relaxation, affecting

some 1,700 head of cattle, was allowed on a certificate from a Veterinary Officer that these cattle were free from fly and otherwise clean. The same Veterinary Officer then proceeded to N'gamiland whence he reported having travelled through the fly belt on the 14th July, and gave his opinion that cattle could then travel through the belt at night without being bitten and infected with trypanosomiasis.

In August, the Chief Veterinary Officer of the Belgian Congo notified that Protectorate veterinary certificates should state that cattle exported to his country were free from contagious abortion and came from an area where the disease is not known to exist. During the remainder of the period under review the Veterinary Officer constantly travelled about the large area entrusted to him, issuing the necessary certificates, and there was no further interruption of the N'gamiland cattle trade. As a contribution by the trade towards the cost of the services rendered, an inspection fee of 1s. a beast was imposed.

At the beginning of November, having received reports of the appearance of lung sickness in the extreme western end of the Caprivi Strip, the Northern Rhodesia veterinary authorities re-imposed the embargo on the cattle export from the eastern portion of the Strip, and, despite representations by the Chief Veterinary Officer that there was practically no danger owing to the great distance of the seat of the disease and the extremely dry region to be traversed, this embargo remained for the rest of the financial year.

The full effect of the increase of 200 lb. in the weight standard applied to cattle exported for slaughter and consumption in the Union, combined with a phenomenally bad rainy season, is seen in the reduction of such exports from 23,307 last year to 7,976 head of cattle this year.

That Protectorate cattle can still find a market, however, is evidenced by the very substantial increase from 2,336 to 11,719 in exports overseas, in spite of the cessation of the bounty of  $\frac{1}{2}$ d. per lb. of dead meat. Moreover, in spite of the interruptions to the trade as sketched above, export of N'gamiland cattle to the Belgian Congo increased from 8,791 to 9,914 head, besides which there was a new export of 2,280 head to Angola.

There was no artificial interruption this year in the export of small stock, but there was a decrease in the total figures from 14,593 head to 13,364 head (principally exports to the Union), attributable to drought.

The export of pigs shows a considerable increase of over 1,500 head, principally to the Union, but it is probable that the increase is apparent only, the records now kept being more precise than in the past.

Good prices for Protectorate cattle have been maintained.



Hides and skins exported show an increase from £29,768 in the previous year to £45,258; a favourable effect of the drought.

The trade in dairy products, one of the most promising of Protectorate industries, was in November afforded the inestimable advantages to be derived from the appointment of a Dairy Expert and Inspector. After energetic tours with the object of ensuring that the creameries were above reproach from a standpoint of sanitation, the Expert found time to give instruction to producers and succeeded so well that before the financial year was ended Protectorate cheese was winning prizes at Agricultural Shows outside the Protectorate. At the end of March, 345 creameries had been registered under the Public Health Regulations. The European export of cream (or butter-fat) was of the value of £23,878, the native export £2,657; last year's European export of this commodity was valued at £22,082. Hitherto, the export of cheese has been inconsiderable, last year it attained the respectable dimensions of 134,611 lb., valued at £6,730. The export of farm butter is also growing and, now that the agricultural post at very low rates is established with both the Union and Rhodesia, should continue to increase.

Skins and karosses of wild animals were exported to the value of £12,840 as compared with £10,456 in the previous year.

There is a considerable export of firewood, i.e., dead trees, which brought into the Territory last year £5,773. The wood goes mostly to Kimberley, Mafeking, and the recently opened Lichtenburg diamond diggings, the demand at the last-named accounting for an increase of nearly 50 per cent. over previous years.

The only minerals produced are gold and silver in the Tati District: 3,807 oz. of gold and 418 oz. of silver, valued at £16,020, as against 3,672 oz. of gold and 371 oz. of silver, valued at £15,469 in the previous year.

Ivory to the value of £396 was exported.

Except in the Chobe District, where the river floods had a most favourable effect on cultivation, the crops of cereals throughout the Protectorate were almost a complete failure owing to drought. The export figures show that some of the surplus yield from the bountiful harvest of 1924-25 still remained to the natives, and the heavy import of maize and mealie meal show that these foods have become exhausted, and that a good harvest during the coming season will be a necessity.

European settlers are mostly still shy of repeating their initial experiment in cotton growing, but one farmer in the Tati District reports enthusiastically on his increasing success during the last three seasons. His last year's crop succeeded, while maize, teff

grass, potatoes, &c., practically failed. He estimated his production at 6 bales from 12 acres, notwithstanding the rainfall on the crop did not exceed 6 inches. He regards cotton as having proved itself without a doubt to be an entirely reliable crop in spite of any drought.

No locusts were reported in the Bechuanaland Protectorate during the year.

The manufacture of what are known as "native curios" is an industry that in South Africa might be said to be peculiar to the Bechuanaland Protectorate. Animals, birds, &c., of the country are carved by the natives in a soft wood (the monyelemyele tree) and decorated by burning with a hot iron. These are much sought after by travellers passing through the Territory, the natives swarming around the trains at any stopping place for the purpose of selling them. Recently this industry and those of kaross and pottery manufacture by the natives were saved from practical extinction, partly on account of apprehension rightly entertained by the Railway authorities from the standpoint of public safety, and partly by the threatened absorption of the trade by storekeepers holding licences from the railways. Timely intervention by the Administration resulted in certain reasonable conditions being accepted by the railways on the one hand and the natives on the other; and this native trade, so attractive to railway passengers and lucrative to the natives, is to be allowed to continue subject, however, to the good behaviour of the sellers on the railway line.

In this connection, the passage through the Territory last year of several trains conveying tourists from abroad should be mentioned as a source of income to the natives. At the instance of the Railway authorities a stop was made in the Bakhatla Reserve to enable the tourists to inspect the native village of Morwa at a short distance from the railway. The arrangements for this by the Chief earned the commendation of the General Manager of Railways and were understood to have been so appreciated by the tourists that the experiment may be repeated next year when the visitors come again in still larger numbers.

The business done at the traders' stores in the Territory continued to improve. The goods imported by these stores amounted to £305,360, against £284,230 in 1925-26, a very satisfactory result having regard to the drought and the fact that no money whatever came into the Territory from the Union in the shape of wages earned by the natives in the destruction of locusts. Moreover, it appears that importations of cotton blankets and other cotton goods have fallen off by about 50 per cent. since the imposition in 1925 of the high customs duty of 1s. per lb. at Union ports, as against 25 per cent. *ad valorem* formerly.

## V.—LEGISLATION.

The laws in force in the Colony of the Cape of Good Hope on the 10th June, 1891, are *mutatis mutandis* and, so far as not inapplicable, the laws in force in the Bechuanaland Protectorate, and no statute of the Colony of the Cape of Good Hope promulgated after the 10th June, 1891, applies to the Territory unless specially applied thereto by Proclamation of the High Commissioner for South Africa.

The native Chiefs continue to adjudicate upon cases other than murder or culpable homicide arising among members of their respective tribes, and upon divorce cases where marriage has taken place in accordance with native law and custom.

Eighteen Proclamations were promulgated during the year 1926-27.

In connection with the Public Service, two amended the Bechuanaland Protectorate Pensions and the Bechuanaland Protectorate Police Pensions Proclamations of 1924, respectively, whilst a third amended the two Proclamations above mentioned.

With regard to finance, two Proclamations further amended the Bechuanaland Protectorate Poll Tax and Income Tax Proclamations of 1922, and fixed the rate of income tax to be levied in respect of the year ended on the 30th June, 1926. Under the latter, farmers were given the option as to whether the value of live stock and produce held by them and not disposed of at the beginning and end of each year of assessment should be taken into account in the determination of the taxable income derived by them from such operations. Another Proclamation related to the appropriation of funds to meet expenditure, and one amended the Customs Tariff and Excise Duties Amendment Proclamation of 1925.

In connection with the cattle industry, the laws relating to the purchase of stock, to the prevention of diseases amongst stock in the Bechuanaland Protectorate, and to the compensation of owners of stock killed or injured by trains running over lines of railways within the Territory, were amended.

In connection with the Bechuanaland Protectorate Courts of Law, further and better provision was made for the punishment of offences relating to execution against the property of judgment debtors, whilst two Proclamations provided for the custody of fugitives while in passage through the country, and for the return of fugitive offenders as between the mandated territory of South West Africa and the Bechuanaland Protectorate.

With regard to land, Proclamation No. 10 of 1914, relating to a grant of land in the Tuli Block to the British South Africa Company, was amended, and certain other lands in that Block were, by Proclamation, vested in that Company and registered in its name.

In respect of the native inhabitants of the Territory, Proclamation No. 19 of 1926 makes further provision with regard to the dissolution of marriages solemnized according to the laws of the Bechuanaland Protectorate and in respect of the property of natives so married. Under this Proclamation Courts of the Resident Magistrate are given sole jurisdiction in all cases of dissolution of native civil marriages, i.e., legal marriages not according to native custom, and in all questions as to the consequent disposal or devolution of property, or as to the disposal or devolution of property consequent upon the death of one of the parties so married, unless it shall appear to the Court of Resident Magistrate on application made to it that, regard being had to the mode of life of the spouses during the subsistence of the marriage, it would be just and equitable that such property should be dealt with according to native law and custom by a native Chief having jurisdiction in respect thereof. In cases of dissolution of marriage provision is made for the right of appeal to the Special Court of the Bechuanaland Protectorate. In the other cases mentioned any party aggrieved by the decision of the Resident Magistrate's Court may appeal to the Court of the Resident Commissioner.

Three other Proclamations provided, respectively, for the appointment of a Railway Commission and for the fixing of railway charges, for the endorsement of conditions on trading licences issued in the Bechuanaland Protectorate, and for the control of radio activities in the Territory.

There has been no session of the Special Court since the 15th May, 1919.

#### VI.—EDUCATION.

During the year 1926-27 there were in the Territory 10 schools for European children, attended by approximately 163 pupils, and 81 native schools, mostly under the ægis of Missionary Societies, with an attendance of some 7,269 children.

Government grants are paid to the schools for European children and, out of an amount of £1,830 set aside for this purpose for the year under review, £1,680 has actually been expended. Bursaries to the amount of £615 and education grants amounting to £610 were also granted to European parents and to officials of the Territory, respectively, for the education of their children. These grants are restricted to children between the ages of 10 and 13 years.

With regard to native education, the sum of £150 was granted to the Tigerkloof Institution for the training of native teachers, and grants of £300 from the general revenue of the Territory and of £90 from the Native Fund were made to the London Missionary Society towards education on behalf of the natives. With the exception of the salary (£600) of the Principal of the National

School at Mochudi, which is at present paid out of the general revenue, the native schools have been mainly financed by the Native Fund, from which the amount of £4,057 has been expended on education generally and the upkeep of school buildings.

The Bamangwato Tribe, in addition to their contributions to the Native Fund, have almost entirely defrayed the expenses in connection with their school at Serowe, which is a very fine one with a considerable attendance.

Native schools were opened during the year at Digawanen in the Kanye District and at Rakano, Vukwe, and Inchwe in the Francistown District, and closed, during the same period, at Digawanen and Kue in the Ngwaketse, at Mambindi in the Francistown, at Bokaa in the Gaberones, and at Tsienyane, Shashashokwe, and Matangwane in the Ngwato Districts, respectively.

Most of the schools, both European and native, are under the control of School Committees, generally presided over by the Resident Magistrate of the District, who pays periodical visits of inspection.

Being detained in Basutoland by the discussion of important educational questions, the Inspector of Education, who is the Director of Education in that Territory, was only able to pay two short visits to the Bechuanaland Protectorate for inspection purposes, instead of the usual longer one.

With regard to the European schools, Mr. Dutton reported satisfactory conditions generally, stating that for the first time in his experience they have reached the stage of steady normal existence. This he attributed to two causes: namely, that the generation of over-grown boys and girls, whose schooling had been neglected in the early years of their life, had passed out of the schools, giving place to new entrants of proper school age, and that there had been of late unusually few changes in the teaching staffs. He proposed, in order to encourage satisfactory teachers to remain at their posts, that a small increase in pay should be given to each teacher who has given two years' satisfactory service in the same school, and as a result of this recommendation the Administration has decided, with the sanction of the High Commissioner, to allot £12 per annum to each School Committee for every teacher who fulfils these conditions.

In connection with his inspection of the native schools of the Territory, Mr. Dutton reported that, owing to the failure of the crops, they have been, on the whole, unusually well attended throughout the year, but that satisfactory progress was impeded in three directions. In the first place classes were, generally speaking, too large; in the second, the staffs comprised too many "foreign" teachers, i.e., certificated teachers from the Union who are unable to teach in Sechuana or Sekgatla; and thirdly, far too little time was being given to a proper study of the vernacular.

He emphasised the importance of staffing the Protectorate schools with qualified teachers who should come from the Bechuana themselves, and of the children being given a type of education adapted to natives living under tribal conditions in a country of their own.

The Magistrates have brought to the notice of the School Committees the matters to which Mr. Dutton specially drew attention with a view to their being set right at as early a date as possible. But it is recognised that some considerable time must elapse before it will be possible, under conditions prevailing in the Territory, to give full effect to the Inspector's suggested improvements.

## VII.—MEDICAL.

The health conditions throughout the Protectorate during the year ended 31st March, 1927, have been exceptionally good. The incidence of prevalent diseases was low; and these, in the main, were marked by a predominance of mild types without serious complications.

Malaria, the constant and universal disease, comes first as usual, with bronchial and catarrhal troubles next in order. The prevalence of malaria was, for the most part, confined to the ordinary ambulatory or non-disabling type, with the usual range of associated troubles or complications—principally bronchial and influenzal catarrhs.

The bronchial troubles, though common, were of a mild character, and seldom terminated in the virulent kind of pneumonia, with a high death-rate, which often develops.

During three months of last winter influenzal catarrh was widespread, and, in the Francistown district, necessitated special visits of investigation among the outlying populations. Lobar pneumonia was the most frequent complication; but, generally, the disease ran a mild course, and, even in the complicated cases, there were few fatalities.

Of other epidemics, endemics, and infectious diseases, the returns for the year show only two cases of anthrax; twenty-six cases of dysentery, with one fatal abscess of the liver, and one other death; one hundred and sixty-nine cases of bacillary, infantile, and undefined diarrhoeas; five cases of leprosy; a few cases of smallpox (alastrim), whooping-cough, and measles; one fatal case of cerebrospinal meningitis; one fatal case of tetanus; and four cases of bilharziasis.

An unusual feature of the past year was an epidemic of puerperal fever at Kanye, with two cases also at Serowe. There were in all seventeen cases at Kanye, of which four were admitted to hospital. **There was only one death.** The low mortality is ascribed to prompt treatment by the arsenical preparation novarsenobillon.

The attendances for free antisyphilitic treatment have been well maintained all round—with an increase here and a falling off there. The returns of individual cases treated are as follows: Kanye and Moshupa 353; N'gamiland 335; Molepolole 164; Francistown 156; Gaberones 72; Serowe 35; Ghanzi 4; Lobatsi 1; a total of 1,120 cases, estimated as representing over 5,000 attendances.

The recrudescence and extension of plague in the Union gave cause for watchfulness as in the past. During the year, 463 rodents—rats and mice—were trapped and destroyed at the main stations, and along the eastern border outposts. But beyond this, and special preparation and readiness against possible emergencies, no practical action proved to be necessary. With, however, the same menace in prospect—after the dormancy of the winter months—and the area of plague infection already proved as far as Lichtenburg, measures of precautionary investigation in regard to the possibility of rodent infection along the southern and eastern borders are contemplated; proposals for carrying out a rodent-plague-infection survey of a strip of territory within those boundaries have been submitted.

It was intended to have completed the hospital provided for at Serowe during the past year. But, through failure to find water at the site selected for the hospital and the Medical Officer's quarters, building had to be postponed, and the provision carried forward on the Estimates for 1927-28, when it is hoped the water difficulty will be solved and the work proceeded with.

Provision is made in the Estimates for 1927-28 for a modern hospital and several mental wards at Gaberones.

The total return of disease for the year, excluding venereal disease, of which the statistics have already been given, is as follows :—

*Mafeking*.—Hospital admissions 24, outdoor attendances 400, no deaths.

*Gaberones*.—Hospital admissions 30, outdoor attendances 1,342, 3 deaths.

*Molepolole*.—Total attendances 1,139, no deaths.

*Kanye*.—Hospital admissions 76, 4 deaths. Outdoor patients 1,423 cases or 4,094 attendances.

*N'gamiland*.—1,208 individual cases.

*Ghanzi*.—150 cases, 1 death.

*Lobatsi*.—36 cases, 1 death.

*Serowe*.—Total attendances 1,139, 5 deaths.

*Francistown*.—Hospital admissions 29, attendances 4,004 or 1,780 cases, 19 deaths.

## VIII.—VETERINARY.

A Government Veterinary Officer and a Stock Inspector have been stationed in N'gamiland, and a Stock Inspector in the Caprivi Strip in order to meet the requirements of the Belgian Congo and the Northern Rhodesia veterinary authorities. A third Government Veterinary Officer was appointed and stationed at Rakops in the Bamangwato Reserve.

It was found possible to dispense with the services of two Stock Inspectors in the last-mentioned Reserve.

Mr. J. W. Walker, M.R.C.V.S., Senior Veterinary Research Officer to Kenya Colony, visited this Territory in October in connection with the inoculation of cattle with artificial cultures. His Government allowed him to supply a small quantity of the cultures for experiment, but no results whatever were observed, probably due to remediable causes. In order to test the cultures further, it is proposed to inoculate cattle simultaneously in Kenya and the Bechuanaland Protectorate with cultures of the same strain.

**Lung Sickness.**

Excluding the Botletle River (or Rakops) area, the year opened with 31,242 animals in quarantine, and ended with 10,684.

During the period under review there have been twelve fresh outbreaks.

A total of 32,560 animals were admitted to quarantine, and 46,064 released: there were 269 animals destroyed in terms of Proclamation No. 4 of 1926, for which a sum of £153 3s. 10d. was paid as compensation, and 727 animals died from the effects of inoculation.

*Rakops area.*—On the Botletle River the year opened with 3,016 animals in quarantine, and ended with 2,116.

There was only one fresh outbreak during the year in this area.

The number of animals inoculated was 3,395, amongst which 118 deaths, as a result of inoculation, are recorded, and 118 animals were destroyed under the provisions of Proclamation No. 4 of 1926, for which a sum of £36 14s. 8d. was allowed as compensation.

*Andara area.*—Owing to reports of lung sickness in South West Africa during July, a buffer strip free of cattle was created in the neighbourhood of Andara. During the operation it was found that the disease had actually crossed our border, and prompt measures were taken to destroy the whole herd in which lung sickness appeared, together with the adjacent herds. Compensation to the amount of £250 is being paid in respect of cases where reports of the disease had been made, and in cases where clean



cattle were killed as a precautionary measure. At the request of the Veterinary Department, the police in this area have been augmented as a further precaution.

### **Liver Disease among Calves.**

No progress has been made in regard to the cause or treatment of this disease. Unfortunately, for some months, the issue from Pretoria of paratyphoid vaccine was stopped. Small supplies have, however, recently been obtained, and it is hoped that larger quantities may be available for farmers' use before long.

### **Anthrax and Quarter Evil.**

The frequency of these diseases has been similar to that in previous years, but there has been a considerable increase in the quantity of anthrax vaccine supplied.

### **Trypanosomiasis.**

There have been many cases of tsetse fly disease in N'gamiland, due to the encroachment in certain parts of the tsetse fly, and in others to careless herding in close proximity to the fly belts.

A number of animals have also contracted the disease on the Maun-Kazungula Road. Intra-jugular injections of potassium antimony tartrate have given excellent results. The injected animals put on condition almost immediately, but it appears that such injections must be continuous to be of any lasting benefit.

### **Dairy Produce.**

A Dairy Inspector to the Bechuanaland Protectorate Government was engaged on 1st November, 1926, for a period of 12 months, to assist in the working of the Public Health Dairy Produce Regulations. He proceeded immediately to make a tour of the dairying districts of the Protectorate, and, in a short space of time, greatly improved the conditions under which our dairy products were manufactured and marketed.

This tour served to familiarise him with local conditions and problems which had to be mastered before he could point out to the dairy farmers, both European and native, what was required of them under the new Regulations, in the way of buildings, utensils, and sanitary methods of production. On the whole, conditions were found to be very fair for a territory which had never had the benefit of any expert direction or instruction.

By the 31st March, 1927, there were 345 registrations under the Regulations, and in every case operations were being carried on in a building which was fly-proofed, well-ventilated, with an impervious floor, a ceiling, and white-washed throughout. The utensils employed were, in every case, suitable, and all mixing buckets of a seamless and hygienic pattern.

## CREAM PRODUCTION.

As a result of the above-mentioned inspection and supervision, of the greater interest which has been taken by both Europeans and natives in dairying, and of the gradual improvement in the milking cattle—due to the importation of better-bred bulls of the dairying breeds, the cream produced in the Territory has improved in quality and increased in quantity. This is the more noticeable as the past year has been unfavourable, generally, to dairy farming, owing to drought, grass-fires, and heavy mortality among calves, due to liversickness.

In 1926 the cream exported from the Protectorate was valued at £22,082, and during the financial year 1926-27 449,036 lb. of butter-fat, valued at £26,535, were produced.

Mr. B. W. Sutton, Senior Dairy Inspector for the Transvaal, who visited a number of creameries in the Territory at the end of March, 1927, expressed surprise at the high standard of creamery seen.

The Bechuanaland Cold Storage Company, a subsidiary company of the Imperial Cold Storage Company, have decided to add a butter factory to their cold storage works at Lobatsi. This butter factory should prove very beneficial to Protectorate dairy farmers, as it will provide a close market for their cream. Hitherto the greatest loss in quality in Protectorate cream has been due to the long distances that it has had to travel before arriving at its destination.

## CHEESE.

On the 31st March there were 13 cheese factories in the Protectorate, each handling up to 150 gallons of milk a day.

It was felt that some form of concentration was necessary, and propaganda was undertaken in this direction.

The Tati farmers, who own 12 of these factories, are trying to start a central factory next year, to handle both their milk and cream.

Under the present system there is bound to be a great lack of uniformity as regards the quality of the manufactured product, and there is little doubt that the best remedy is the manufacture of the cheese centrally by a competent cheese maker.

The fact that the gold medal for cheese at the recent Port Elizabeth Show was won by a Tati cheese factory, against the strongest competition from Union factories, proves that excellent cheese can be manufactured in the Protectorate.

The greater part of the Protectorate cheese has to compete against cheese made in the Union, and dissatisfaction is expressed by buyers that the former is ungraded.

The introduction, at the beginning of next season (October), of some form of Government grading of cheese, so that, in this commodity, the Protectorate may compete on an equal footing

with the Union, is under consideration. The adoption, however, of any measure of that description must depend upon the wishes of the cheese manufacturers themselves.

#### EXTENSION WORK IN DAIRYING.

There has been little opportunity for instructional or demonstrational work during the past year. It is hoped that as all creameries become permanently registered more time will be available for this very necessary work.

It is proposed, if time permits, to hold short courses of instruction in cream production at both European and native centres at the commencement of next season.

#### CHECK GRADING.

A considerable amount of check grading has been carried out on cream in transit to the various butter factories and cream depots.

For the most part these factories were found to be grading conscientiously.

#### STATISTICS.

##### BUTTER-FAT PRODUCTION :—

			<i>lb.</i>	
European	...	...	307,531	} first grade.
Native	...	...	4,252	
Total	...	...	311,783	
			<i>lb.</i>	
European	...	...	48,523	} second grade.
Native	...	...	8,608	
Total	...	...	57,131	
			<i>lb.</i>	
European	...	...	40,650	} third grade.
Native	...	...	33,316	
Total	...	...	73,966	
			<i>lb.</i>	
European	...	...	Nil.	} below grade.
Native	...	...	6,156	
			<i>lb.</i>	
European	...	...	396,704	} Total, Butter-fat.
Native	...	...	52,332	
Final Total	...	...	449,036	

**REGISTERED CREAMERIES :—**

European	...	...	...	...	...	132
Native	...	...	...	...	...	54
Coloured	...	...	...	...	...	5

**CREAMERIES AND CHEESE FACTORIES COMBINED :—**

Europeans	...	...	...	...	...	13
Native milk sellers	...	...	...	...	...	135
Stores handling Dairy Produce	...	...	...	...	...	6

Total Registrations	...	...	...	...	...	345
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**CHEESE PRODUCTION :—**

						<i>lb.</i>
Cheddar	...	...	...	...	...	113,553
Gouda	...	...	...	...	...	21,058
Total	...	...	...	...	...	134,611

FARM BUTTER :—2,081 lb.

**VALUE OF DAIRY PRODUCTS :—**

<i>European.</i>			<i>lb.</i>	<i>£</i>
Butter-fat	...	...	396,704	23,878
Cheese	...	...	134,611	6,730
Farm butter	...	...	2,081	176
				£30,784
<i>Native.</i>				
Butter-fat	...	...	52,332	2,657
Total value	...	...	...	£33,441

**Export of Cattle.**

The following cattle were exported from the Protectorate during the year :—

To the Johannesburg abattoir, for consumption in	
South Africa	7,976
To Belgian Congo, via Kazungula	9,914
To Angola	2,280
To Johannesburg abattoir, for export overseas	2,333
To Durban, for export overseas	9,386
Total	31,889

Compared with the previous year there was a decrease of 15,331 head sent to the Johannesburg abattoir, which may be accounted

for by the standard weight for oxen having been increased to 1,050 lb. since the 8th January, 1926, and poor veld consequent on the drought experienced throughout the Protectorate.

This reduction, however, was partly regained in export overseas and overland both to Angola and to the Belgian Congo. There were increases of 9,353 overseas and 1,123 to the Belgian Congo, while the export to Angola was new.

### Export of Other Animals.

Sheep and goats to the number of 3,572 were exported to the Union via Ramathlabama, and 9,792 by rail to Rhodesia.

The Union export shows a decrease of 1,710, due to more stringent restrictions, while the Rhodesian export is an increase of 481 compared with the previous year.

The number of pigs exported to the Union was 1,674. A few head were also exported to Rhodesia.

### Importations.

Permits for the importation of the following animals were issued during the year :—

Cattle	...	...	...	...	...	1,076
Sheep and Goats	...	...	...	...	...	1,043
Donkeys	...	...	...	...	...	1,798
Horses	...	...	...	...	...	540
Mules	...	...	...	...	...	97
Pigs	...	...	...	...	...	208

### Vaccines.

The following vaccines and sera were issued through the Chief Veterinary Officer's Department for use in the Protectorate during the period under review :—

					<i>Doses.</i>
Anthrax	...	...	...	...	31,265
Quarter evil	...	...	...	...	4,585
Redwater and gallsickness	...	...	...	...	4
Horse sickness	...	...	...	...	30

There were also 1,500 doses of the Government wire-worm remedy supplied.

In the absence of the Chief Veterinary Officer on home leave for seven months, the Administration was fortunate in obtaining the services of Mr. R. W. Dixon, M.R.C.V.S., late Assistant Principal Veterinary Officer of the Union, who occupied quarters at Palapye Road.

One new Veterinary Officer has been appointed to the Administration during the year under review.

## IX.—JUDICIAL STATISTICS.

The number of cases adjudicated upon by officials of the Administration during the year 1926-27 was 724, as against 554 in 1925-26 and 715 in 1924-25.

There were 13 cases of homicide: of these one was acquitted, ten were sentenced to imprisonment with hard labour, and two were extradited.

There were 76 cases of other offences against the person, in 59 of which conviction followed; 109 offences against property, with 96 convictions; and 526 prosecutions for other offences, in which 450 convictions followed.

## X.—POSTAL.

The administration and control of the postal services in the Bechuanaland Protectorate are, subject to the authority of the Resident Commissioner, vested in the Postmaster-General of the Union of South Africa.

*Offices.*—There were 22 offices of all grades in operation in the Territory during the year ended 31st March, 1927. Money-order and Savings Bank business was transacted at three of these, eight were postal and telegraph agencies, one a telegraph office only, and the remainder postal order agencies.

*Money-orders.*—A considerable increase in the value of money-order transactions for the year is shown both in issues and payments—particularly in the former—in comparison with those issued and paid, respectively, during the previous year. Money-orders to the number of 561, valued at £3,165 9s. 11d., were issued as against 382, of the value of £2,304 3s. 10d., issued during 1925-26, and 191 orders valued at £1,094 3s. 7d. were paid out in comparison with 154 orders, representing £1,006 7s. 6d., paid out in the preceding year.

*Postal Orders.*—Very little difference appears between the value of postal orders issued and paid during the current financial year and the value of those issued and paid, respectively, in the foregoing year. Orders numbering 15,678, valued at £6,117 1s. 1d., were issued during the period under review as against 14,873, worth £6,010 15s. 3d., issued in 1925-26, and 3,889 postal orders of the value of £2,391 13s. 5d. were paid out as compared with 3,797, valued at £2,159 12s. 1d., in the previous year.

*Savings Bank.*—With regard to the Savings Bank, there has been a decrease in value during the current financial year, both in respect of the sums deposited and the amounts withdrawn, 260 deposits, valued at £1,679 6s., as against 314, worth £2,035 5s. 2d., having been made, whilst 104 withdrawals to the amount of £1,120 4s. 11d., in comparison with 69, valued at £1,141 4s. 6d. in 1925-26, were effected.

*Revenue and Expenditure.*—The total postal revenue from all sources amounted to £19,430 5s. 6d., being an increase of

£9,349 10s. 9d. over the revenue collected during 1925-26. This increase is due to the payment by the United Kingdom, for the years 1924-25, of transit rates, and, also, to increased traffic in parcels.

The expenditure for the year under review amounted to £4,925 5s. 8d., showing an increase of £785 19s. in comparison with the expenditure for the previous financial year.

*The Agricultural Parcel Post Service.*—The Agricultural Parcel Post Service, established at the end of 1925, between the Bechuanaland Protectorate (with the exception of Maun, Kasane, and Ghanzi) and the Union of South Africa, at rates very similar to those obtaining in the Union, has worked satisfactorily and has benefited not only the farmers but all sections of the community.

## XI.—METEOROLOGICAL.

There is on charge at each Magisterial Station in the Bechuanaland Protectorate a thermometric equipment (dry bulb, wet bulb, maximum and minimum thermometers), supplied on loan from the Union Government, and at Ghanzi there are installed self-recording instruments consisting of an anemobiograph, barograph, thermograph and hygrograph (also the property of the Union Government), from which weekly reports are forwarded to headquarters and to the Chief Meteorologist, Pretoria.

The monthly rainfall and the monthly average maximum and minimum temperatures taken at each station during the year 1926-27 are shown in the following tables.

RAINFALL 1926-27.

	Ghanzi.	N'gamiland.	Kasane.	Francistown.	Serowe.	Tuli Block.	Gaberones.	Molepolole.	Lobatsi.	Kanye.
1926.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
April ...	·86	·55	·57	·03	·12	—	·08	·16	·97	·1
May ...	1·74	·36	·12	·14	·32	·51	·64	·33	1·22	1·22
June ...	·31	—	—	—	—	—	·6	·67	·52	·41
July ...	—	—	—	·2	·62	2·52	·18	—	·05	—
August...	—	—	—	—	—	—	—	—	—	—
September	·15	—	—	—	—	—	1·19	·29	·31	—
October	·92	·66	·9	1·07	·63	·29	·58	·63	1·44	·9
November	4·46	1·53	2·56	·62	3·23	2·47	3·88	4·97	3·83	2·97
December	4·28	4·23	8·43	2·71	4·69	2·4	1·07	3·0	1·58	2·46
1927.										
January	3·0	1·51	4·59	3·66	1·78	1·45	4·27	4·64	2·71	2·53
February	4·26	1·73	4·83	2·34	·15	3·57	2·71	4·24	2·78	3·01
March ...	2·71	·35	·78	—	—	·68	2·95	3·08	2·23	2·32
Totals	22·69	10·92	22·78	10·77	11·54	13·89	18·15	22·01	16·64	15·92

The Bechuanaland Protectorate lies, roughly, between 2,000 and 5,000 ft. above sea-level and only a few people live at the cooler altitudes of from 4,000 to 5,000 ft. The portion of the country inhabited by the greater number of both Europeans and natives is adjacent to the only line of railway, which passes through the eastern side of the Territory for a distance of 403 miles; the average altitude of the stations and sidings along this section of the line is 3,418 ft.

The approximate latitude and longitude of the various observation stations, taken from the latest map of the Bechuanaland Protectorate (compiled by the Geographical Section, General Staff, No. 2681 of 1912) is as follows :

	<i>Latitude S.</i>		<i>Longitude E.</i>	
	<i>Deg. Min.</i>		<i>Deg. Min.</i>	
Ghanzi (Gemsbok Pan) ...	21	41	21	47
N'gamiland (Maun) ...	20		23	30
Kasane ...	17	51	25	13
Francistown ...	21	9	27	28
Serowe ...	22	23	26	48
Tuli Block (Selika) ...	23	1	27	44
Gaberones ...	24	40	25	50
Kanye ...	24	59	25	18
Lobatsi ...	25	15	25	38
Molepolole ...	24	28	25	25

The time of observation is 8.30 a.m., and in all cases where this rule cannot be complied with a note must be made to that effect.

The self-registering thermometers are protected in the shade.

The rain gauges are placed in open positions free from obstruction from surrounding objects.

At the instance of the Union Government, self-recording instruments consisting of an anemobiograph, barograph, thermograph and hygrograph were installed at Ghanzi.

#### TEMPERATURES, 1926-27.

1926-27.	April.		May.		June.		July.		August.		September.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Ghanzi ...	85.30	54.80	78.71	45.13	73.07	40.57	68.39	33.06	79.52	40.55	85.63	47.67
N'gamiland ...	84.99	55.55	81.87	46.86	76.95	44.85	72.85	40.58	81.66	46.34	89.55	55.67
Kasane ...	85.08	60.57	81.39	51.11	78.57	46.38	75.80	44.40	84.08	48.41	93.64	57.06
Francistown ...	82.17	52.60	80.61	49.41	73.60	37.57	69.81	37.90	77.77	43.19	86.87	52.70
Serowe ...	82.39	52.74	77.28	46.59	71.08	41.21	65.35	38.38	74.52	39.98	83.90	50.90
Tuli Block ...	85.45	55.54	81.36	47.23	79.72	37.38	71.15	37.51	81.42	41.84	84.24	57.52
Gaberones ...	85.30	50.50	77.26	40.77	71.83	38.87	67.90	31.10	78.55	35.97	83.23	48.13
Molepolole ...	83.00	54.20	75.81	45.97	69.45	42.14	64.84	35.64	76.23	43.71	82.17	50.31
Lobatsi ...	81.79	51.40	73.84	41.51	67.97	38.43	64.58	33.81	75.68	39.77	79.37	46.30
Kanye ...	85.57	51.30	69.31	49.12	64.50	46.14	59.08	38.48	69.41	47.67	78.20	54.03
Total average	84.10	53.92	77.74	46.37	72.67	41.35	67.98	37.09	77.88	42.74	84.68	52.03



TEMPERATURES, 1926-27—*cont.*

1926-27.	October.		November.		December.		January.		February.		March.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Ghanzi ...	88.32	55.68	88.63	62.13	87.64	62.68	93.52	63.97	91.00	62.04	85.63	60.39
N'gamiland ...	91.66	61.34	90.73	64.88	90.53	64.32	94.10	66.09	92.43	62.12	92.13	61.08
Kasane ...	93.07	63.91	91.93	64.49	87.92	65.77	91.08	63.02	86.50	63.04	88.90	61.35
Francistown ...	90.58	59.68	88.60	62.63	88.23	64.52	91.19	65.65	88.46	62.68	84.94	59.06
Serowe ...	87.75	58.61	88.30	62.54	88.03	62.37	92.60	63.97	86.59	50.07	82.22	58.21
Tuli Block ...	94.03	65.58	93.73	74.00	94.13	68.35	95.74	72.00	90.79	67.36	84.66	63.60
Gaborones ...	89.00	57.00	89.33	61.83	91.29	63.03	93.58	65.67	88.82	62.25	84.29	59.87
Molepolole ...	86.45	57.80	86.86	61.83	86.90	64.41	91.32	64.29	86.18	63.11	80.75	59.49
Lobatsi ...	84.58	54.32	85.97	58.27	88.48	62.87	90.10	64.36	86.00	61.14	81.03	58.71
Kanye ...	83.96	57.07	80.05	59.92	81.00	63.74	84.93	66.10	81.36	62.32	77.87	59.55
Total average	88.94	59.10	88.41	63.25	88.41	64.26	91.82	65.51	87.81	61.61	84.25	60.13

## XII.—N'GAMILAND FLOODS.

REPORT BY THE RESIDENT MAGISTRATE, N'GAMILAND, DATED  
5TH DECEMBER, 1926.

The floods during 1926 equalled those of 1925, and are accounted for by reported heavy rainfall in Angola. The rainfall for 1925-26 amounted to 31.14 inches, as against 34.25 inches for the 1924-25 season.

As late as the 22nd September, I travelled by river to Andara and, although the water was then dropping rapidly, managed to get through the swamps in the neighbourhood of Kabamakumi, in the large aluminium boat. On my return journey towards the end of November, I took the Taogo River to Tsau, but could only reach Xam, about twenty-five miles from Gomaree, owing to dense reeds and not to lack of water.

The Thamalakani River at Maun reached its highest level on the 14th July, when it then registered 4 ft. 6 ins. above the normal height. It began to drop at the beginning of August and at the present time has nearly reached the normal. The floods reached Maun at the beginning of June.

From native information it appears that the Magwexana spillway (the communication between the Chobe and the Okavango) this year was flooded and that the water met, an occurrence which has not been known since the year 1910.\*

There has been a considerable amount of water in the Lake N'gami itself, partly owing to the fact that last year's water helped to swell the volume.

There has been water both in the Naraga and Thamalakani rivers since the 1925 floods, and they have both been exceptionally high this year.

\* (Since verified by the Magistrate's personal observation).

From reliable native sources I am informed that water this year reached the Mababe Flats via the Moghoghelo and Kudumane rivers which form what is called the Mababe River. This did not occur during the last year's floods and from what I can gather has not been known since the big floods in 1910.

Captain Stigand's maps of N'gamiland (G.S., G.S., 2988 A and B of 1922) will be found useful in studying the above report.

C. L. O'B. DUTTON,  
*Government Secretary.*

31st March, 1927.



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# NORTHERN RHODESIA.

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### HISTORY AND GEOGRAPHY.

The territory known as the Protectorate of Northern Rhodesia lies between Latitudes 8.15° S. and 18° S. and between Longitudes 22° E. and 33.35° E. It is bounded on the west by Angola, on the north-west by the Belgian Congo, on the north-east by Tanganyika Territory, on the east by the Nyasaland Protectorate and Portuguese East Africa, and on the south by Southern Rhodesia and the mandated territory of South West Africa; and comprises in all an area that is computed to be about 287,950 square miles. The River Zambesi forms the greater part of the southern boundary; its two main northern tributaries are the Rivers Kafue and Luangwa. With the exception of these river valleys, the territory consists of a table-land varying from 3,000 to 4,500 feet in height, though in the north-eastern portion, and especially in the vicinity of Lake Tanganyika, the altitude is greater.

NOTE.—A Sketch Map of Northern Rhodesia will be found in the Report for 1924-25 (No. 1292).

Very little is known of the history of the native population until quite recent years. It is conjectured that the various movements of the Bantu people from the north, starting perhaps 2,500 years ago, crossed and recrossed what is now Northern Rhodesia. Whether these movements, in their effect on this portion of Central Africa, were migratory or predatory, whether they found any aboriginal inhabitants or traversed an uninhabited forest, whether they resulted in any form of settlement or merely passed to other parts of Africa, is alike unknown. All that can be said is that the vast majority of the present native population, though of Bantu origin, is descended from men who themselves invaded this country not earlier than 1700 A.D. One or two small tribes, numbering now only a very few thousand, such as the Masubia on the Zambesi, are all that remain of the inhabitants of Northern Rhodesia prior to that date. Inroads from the north were frequent as well as from the south, whence came the Angoni, a branch of the warlike Zulu, in the middle of the 19th century. At the present time the most important tribes are the Awemba (98,000), the Achewa (66,000), the Asenga (60,000), the Angoni (57,000), and the Awisa (32,000) in the eastern districts; and the Batoka (96,000), the Barotse (44,000), and the Bakaonde (25,000) in the western districts. There are said to be 38 distinct native languages in use, of which Wemba and Chinsenga have been adopted for educational purposes in the eastern districts, and Tonga (closely allied to Chila) and Sikololo in the western. In addition to these, Chinyanja is in use as the official language of the Police, and is probably the language most generally spoken by Europeans; it is really a Nyasaland language—the word means “Language of the Lake”—but it is also spoken to some extent round Fort Jameson.

The earliest recorded information about Northern Rhodesia is contained in the diaries of the Portuguese Governor of Sena, Dr. Lacerda, and of his chaplain, Pinto, who led an expedition in 1798 from Tete into Kasembe's country, close to the eastern shore of Lake Mweru. Little more is known of the history of the country until the arrival of Dr. Livingstone in 1855, when he visited the Victoria Falls and travelled through Barotseland. But in the interval Arab inroads from the north had occurred, and the slave trade which they established continued unchecked until 1893. This baleful influence had gradually spread from the shores of Lakes Nyasa and Tanganyika over the whole territory; but with the establishment of a Government post at Abercorn in that year the slave trade in this part of Africa received its first serious check. In each succeeding year more Arab settlements on the Lake shores were destroyed. Sir Harry Johnston defeated the Arab Chief Mlozo at Karonga in 1894, and the last caravan of slaves, which was intercepted on its way to the East Coast, was released at Fort Jameson in 1898. Even after that, bands of slave traders were occasionally encountered on the north-east boundary, and skirmishes

with them took place as late as 1900; but with the final establishment of the administration of the British South Africa Company the slaves quickly disappeared from the country.

Previous to 1899 the whole territory had been vaguely included in the Charter granted to the British South Africa Company, but in that year the Barotseland-North-Western Rhodesia Order in Council placed the administration of the western portion of the country by the Company on a firm basis; and this was closely followed by the North-Eastern Rhodesia Order in Council of 1900 with similar effect. The two Territories were amalgamated in 1911 under the designation of Northern Rhodesia, and the administration of the Company (subject to the exercise of certain powers of control by the Crown) continued until 1924, when, in terms of a settlement arrived at between the Crown and the Company, the administration of the Territory was assumed by the Crown, and the first Governor was appointed on 1st April, 1924.

The currency in use consists partly of English coinage and partly of notes of the Southern Rhodesian issues of the Standard and National Banks of South Africa, both of which have branches and agencies in this country. The coins and notes of the Union of South Africa are also current at par.

English weights and measures are employed.

There are considerable climatic differences between various parts of the country. The Zambesi, the Luangwa, and the Kafue valleys experience a much greater humidity and a more trying heat than do the plateaux above 3,500 or 4,000 feet. The hottest months are October and November, before the rains break, when the mean maximum is about  $97^{\circ}$  in the Zambesi valley stations and  $85^{\circ}$  at plateau stations. The mean maximum for the eight months of the hot season (September to April) is approximately  $90.3^{\circ}$ , with a mean minimum of  $64.5^{\circ}$ , while the corresponding figures for the four months of the cold season (May to August) are  $78.7^{\circ}$  and  $46.6^{\circ}$ . During 1926, the highest mean maximum recorded at Livingstone for any one month was  $94.2^{\circ}$  in October, and the lowest mean minimum for any one month was  $75.4^{\circ}$  in July; at the same station the absolute maximum for the year was  $102.5^{\circ}$  recorded in November, and the absolute minimum was  $37.0^{\circ}$  recorded in August. The highest temperature recorded in the territory was  $109^{\circ}$  at the Barotse National School and at Namwala, and the lowest was  $30^{\circ}$  at Solwezi.

The rainy season usually commences in November and lasts until April, after which month rain is rarely experienced and then only in negligible quantities. The rainfall during the 1926-27 season was under the normal at all stations, with the exception of a few in the more northerly parts of the country. During the months of January, February, and March, 1927, periods of drought lasting from 11 to 22 days were experienced, during which less than half an inch of rain fell. Only a narrow strip along the Anglo-Belgian

border between Sakania and Mwinilunga, the Luapula valley from Kapalala to Lake Mweru and the shores of Lake Tanganyika escaped the effects of these rainless periods. The rainfall recorded at Livingstone was only 22.52 inches, while at Broken Hill, Fort Jameson, and Abercorn the rainfall amounted to 27.23, 28.04 and 50.35 inches respectively. In the western districts, 36.65 inches were recorded at Mongu and 58.37 inches at Mwinilunga.

## CHAPTER I.

### GENERAL.

The year under review commenced with the first Conference of East African Governors, which was opened at Nairobi on the 25th January, 1926. It was unfortunate that serious washways on the railway line between Salisbury and Beira delayed the attendance of the Governor of Northern Rhodesia until the closing days of the Conference.

The second Conference of Unofficial Representatives of the East African Colonies and Protectorates was opened by Sir Herbert Stanley at Livingstone on the 3rd September, 1926, and sat thereafter at the Victoria Falls Hotel under the presidency of Lord Delamere. Many of the delegates travelled from and back to the other East African Dependencies by motor-car, and encountered no serious difficulties *en route*.

Two important aircraft flights passed over this Territory in the early part of the year. Mr. Alan Cobham (now Sir Alan Cobham, K.B.E.), flying a de Havilland aeroplane, and accompanied by Mr. Emmott as cinematograph operator and by Mr. Elliott as mechanic, reached Livingstone *en route* for Cape Town on the 29th January. Aerodromes had been prepared for him at Abercorn, Ndola, Broken Hill, and Livingstone, and landings were made at those four places. Torrential rains caused some slight delay at Ndola, but apart from that no difficulty was experienced. This was all the more satisfactory as the flight took place at the worst time of the year. Mr. Cobham left for Bulawayo on the 31st January. The return flight being made against the clock, no landing was made at Livingstone, as Mr. Cobham took a direct line from Bulawayo to Broken Hill on the 28th February. In the following month a flight of the Royal Air Force, consisting of four Fairey seaplanes fitted with land undercarriages, under the command of Wing-Commander Pulford, C.B.E., followed the same course as that taken by Mr. Cobham. The Flight reached Livingstone on the 25th March, and left for Bulawayo four days later.

A conference was held at the Colonial Office in June between representatives of the British South Africa Company and of the Governments of Northern Rhodesia, Southern Rhodesia, and the Bechuanaland Protectorate, with a view to reaching an agreement

whereby these Governments should be vested with some measure of control over the rates imposed by the Companies owning the railways which run through their respective territories. After discussion lasting several weeks, it was agreed to set up a Railway Commission consisting of a Chairman, appointed by the Governments jointly with the approval of the Secretary of State for the Colonies, and one representative of each of the three Governments. Definite provision was made for an adequate return on the capital invested in the various railway Companies, for sinking fund, for the payment of interest on loans; and, subject to these, the duty was laid upon the Commission of seeing that the rates charged by the railways were kept at the lowest possible level. The necessary legislation implementing this Agreement was passed early in 1927.

A Commission was appointed in July to make recommendations as to the demarcation of Native Reserves in the area adjacent to the railway line. Its investigations lasted for several months, and its report was still in course of preparation at the end of the year.

The Legislative Council met twice. The third Session of the First Council was opened on the 5th March, and the Council was dissolved on the following day. The First Session of the Second Council was opened on the 14th September, and was remarkable for the fact that it was the first occasion on which elected members had sat in Council.

In August, the Governor-General of the Union of South Africa and Her Royal Highness the Princess Alice, Countess of Athlone, paid an official visit to Livingstone. Prior to April, 1924, Northern Rhodesia had been in some respects under the control of the Governors-General in their capacity as High Commissioners for South Africa, and in those days visits by the High Commissioner for the time being were of comparatively frequent occurrence. But this was the first time since Northern Rhodesia had acquired her new status that a Governor-General of the Union had visited her in that capacity, and the visit was very warmly appreciated.

Another distinguished visitor to Livingstone was Sir Robert Baden-Powell, who arrived in October accompanied by the Chief Guide. Scouts and Guides came down from Bwana M'Kubwa, Broken Hill, and Lusaka, and a most successful combined Camp was held in the vicinity of the Victoria Falls in honour of the occasion. There can be no doubt that the Chief Scout's and Chief Guide's visit gave a strong impetus to the scout and guide movements in Northern Rhodesia.

The year as a whole was one of sustained activity in mining and commerce. The progress that has been made is reflected in the vital statistics for the year. No census has been taken since 1921, but the European population on the 31st December, 1926, was computed to be 5,581, of whom 2,742 were adult males, 1,326 adult females, and 1,513 children. This shows an increase

of 1,400 Europeans since the 1st April, 1924. The native population is estimated to number 1,199,163, as compared with 979,704 in 1921. There are also about 70 Asiatics. Immigrants into Northern Rhodesia in 1926, exclusive of natives of Africa, numbered 756, of whom 591 were British subjects. Eighteen persons were deported, five of these being alien native criminals. No figures of emigration are available.

As regards Native Affairs, the year has been peculiarly uneventful. The long series of witchcraft murders, conducted during 1925 by an educated Nyasaland native who styled himself Mwanalesa, "Son of God," had their sequel in his execution in January together with some of his chief accomplices. Measures were taken to impress on those districts in which he had done his evil work, with the knowledge and connivance of the whole population, not only the power of the Government to deal with those who broke the law, but the duty of the individual to assist the Government in apprehending and punishing such persons.

## CHAPTER II.

### FINANCE.

The revenue for the year ended the 31st March, 1927, amounted to £421,035, being an excess of £67,624 over the estimate and an increase of £49,989 on the revenue for the preceding year. This excess was due to the receipt beyond the estimated amount of £17,917 by the Customs Department, £9,238 in respect of Native Tax, £15,539 in respect of Income Tax, £11,374 by the Post Office, £6,770 more Fees of Court, £1,296 from Land Sales, and an aggregate of £5,490 under other Heads.

The expenditure for the same period was £455,451, showing a saving of £13,072 on the sum authorised, but an increase of £61,306 on the expenditure of the preceding year. Savings on the estimated amounts were effected to the sums of £2,085 on European Education, £3,720 by the Department of Native Affairs and the District Administration, £1,218 on the Survey vote, £1,803 on the Judicial, Legal, and Prisons vote, £3,637 by the Northern Rhodesia Police, £7,802 under Public Works Extraordinary, and an aggregate of £2,376 under six other Heads. On the other hand, the Posts and Telegraphs vote was exceeded by £1,589, the Health vote by £1,020, the Veterinary and Agriculture votes by £1,193 and £839 respectively, the vote for Public Works Recurrent by £1,107, the vote for Pensions by £1,226, while four other Heads showed expenditure in excess of the Estimates totalling £2,595.

The following figures give the detail of Revenue and Expenditure for the year :—

*Revenue.*

Head		£	s.	d.
I.—Customs	... ..	107,917	5	5
II.—Licences, Taxes and Internal Revenue not otherwise classified	... ..	205,626	19	11
III.—Fees of Court, etc.	... ..	41,142	6	8
IV.—Post Office	... ..	29,484	2	3
V.—Rent of Government Property	... ..	9,661	7	2
VI.—Interest	... ..	3,880	7	3
VII.—Miscellaneous	... ..	7,026	13	11
VIII.—Land Sales	... ..	16,295	17	0
Total Revenue	... ..	£421,034	19	7

*Expenditure.*

	£	s.	d.
1. The Governor's Office	5,886	1	4
2. Secretariat	6,409	0	11
3. European Education	13,486	16	9
4. Printing and Stationery	7,243	16	8
5. Department of Native Affairs	12,885	7	9
6. District Administration	101,897	2	3
7. Treasury	8,652	7	5
8. Commissioner of Taxes	1,993	10	1
9. Customs	8,687	17	5
10. Posts and Telegraphs	28,302	0	9
11. Transport and Supply	—		
12. Lands Department	14,461	7	6
13. Survey Department	8,161	10	10
14. Audit Office	3,045	8	6
15. Judicial, Legal and Prisons Department	20,701	15	4
16. Northern Rhodesia Police	53,069	18	2
17. Health	38,968	18	2
18. Veterinary Department	19,552	17	4
19. Agricultural Department	9,832	8	3
20. Mines and Public Works Department	8,355	16	5
21. Public Works Recurrent	18,700	12	4
22. Public Works Extraordinary	32,105	10	1
23. Percentage of Tax payable to Barotse Trust Fund	6,300	0	0
24. Miscellaneous Services	8,769	4	0
25. Pensions and Gratuities	17,981	6	0
Total Expenditure	£455,450	14	3

The deficit for the year, therefore, amounted to £34,416, as against an estimated deficit of £115,112. The following statement gives the financial position as at the 31st March, 1927 :—

	£
Excess of Assets over Liabilities, 1st April, 1926	209,320
Excess of Expenditure over Revenue ... ..	34,416
	<hr/>
Excess of Assets over Liabilities, 31st March, 1927 ... ..	£174,904
	<hr/>

The following is a statement of Assets and Liabilities as at the 31st March, 1927 :—

<i>Liabilities.</i>	£	<i>Assets.</i>	£
Deposits ... ..	32,777	Cash ... ..	151,949
Excess of Assets over Liabilities ... ..	174,904	Investments ... ..	2,500
		Advances ... ..	24,442
		Unallocated Stores	28,790
	<hr/>		<hr/>
	£207,681		£207,681
	<hr/>		<hr/>

During the last five years there have been large increases in both the revenue and the expenditure of the Territory, as the following table shows :—

	<i>Revenue.</i>	<i>Expenditure.</i>	<i>Excess of expenditure over revenue.</i>
	£	£	£
1922-23 ... ..	258,154	338,983	80,829
1923-24 ... ..	278,928	323,509	44,581
1924-25 ... ..	309,795	340,327	30,532
1925-26 ... ..	371,046	394,145	23,099
1926-27 ... ..	421,035	455,451	34,416

It is confidently anticipated that the progress which these figures reflect will be fully maintained in the ensuing years.

In the course of the year it was announced that a loan of £10,000,000, the interest on which will be guaranteed by His Majesty's Government, would be raised, in accordance with a recommendation of the East African Commission, mainly for the improvement of communications in the East African Dependencies. Expenditure in Northern Rhodesia amounting to £225,000, which will be met in due course from the proceeds of the loan, has been approved, of which £185,000 has been apportioned to the construction of arterial roads, £5,000 to the survey of the Zambesi waterway, £2,500 to the construction of a harbour at Mpulungu at the southern end of Lake Tanganyika, and £30,000 to the



establishment of a veterinary and agricultural research station. No part of the loan funds were made available during 1926; but work on all the items except the Zambesi Survey was commenced, the expenditure so incurred being met temporarily out of the general funds of the Territory.

A new Income Tax Ordinance on the lines of the legislation passed in other Colonial Dependencies was introduced at the session of the Legislative Council held in September. This did not effect any real change in the existing basis of taxation.

Two Banks operate in Northern Rhodesia: the Standard Bank of South Africa, which has branches at Livingstone and Lusaka with a sub-branch at Mazabuka, and Barclay's (Colonial) Bank, into which the old National Bank of South Africa has been merged, with branches at Broken Hill and Ndola.

The Post Office Savings Bank was established at all Post Offices at the beginning of 1926, and has made satisfactory progress. The amount deposited during the year was £3,313, and the amount withdrawn was £907. Interest paid or accrued to depositors at the 31st December, 1926, amounted to £27. A sum of £1,500 was invested on behalf of the Savings Bank during the year.

### CHAPTER III.

#### PRODUCTION.

##### A. Land and Agriculture.

Of the total approximate area in the Territory of 184,288,000 acres, the North Charterland Exploration Company holds, subject to the due assignment of native reserves, a concession over 6,400,040, the British South Africa Company owns three freehold areas comprising 2,758,400 acres in the Tanganyika District, and 2,654,227 acres have been otherwise alienated for purposes of European settlement. The total area of alienated land is therefore 11,812,667 acres, about 6.4 per cent. of the whole Territory.

Most of the alienated land is used for grazing, some of it is cultivated but a large area is unsuitable for either grazing or cultivation. The following table will give a comparative idea of the acreage under the various staple crops under cultivation in the three previous seasons:—

<i>Season.</i>		<i>Maize.</i>	<i>Tobacco.</i>	<i>Wheat.</i>	<i>Cotton.</i>	<i>Total under cultivation.</i>
1923-24	...	42,377	3,462	1,250	2,331	52,243
1924-25	...	35,568	4,323	2,633	16,702	61,712
1925-26	...	36,470	4,939	3,387	11,849	60,297

Smaller areas were planted with fodder crops, groundnuts, beans, potatoes, kaffir corn, oats, etc., which are considered minor crops. The climatic conditions, though not so disastrous as the previous season to the European agricultural community, were again unsuit-

able for cotton growing on account of the late and heavy rainfall. The previous season, with its heavy rainfall, caused an increase in cotton pests, and the damage these have caused in this season has been as serious as in the previous one. The 11,849 acres planted produced but 202,511 lb. of lint, an increase, roughly, of 7,000 lb. of lint on that produced in 1925 from 16,702 acres planted.

Sums of money amounting to over £9,000 were loaned to the farmers growing cotton, half the capital of the loans being supplied by the Government and half by the Empire Cotton Growing Corporation. The granting of the loans was controlled by a committee known as the Cotton Growers' Assistance Committee. These loans enabled many settlers to plant cotton who would otherwise not have been able to do so after the two previous bad seasons, the drought in 1923-24 and the flood of 1924-25. The one purpose of the loans, the immediate production of cotton, was defeated by the climatic conditions; but it is hoped that with suitable seed cotton may be grown successfully in more favourable seasons. It appears to be a very beneficial rotation crop with maize.

There was an increase in the acreage planted with maize. This increase would have been still greater if the first rains had fallen earlier, when they are usually expected. Though there was a slight increase in the acreage under this crop the yield was almost double that of the previous season, namely, 177,428 bags of 200 lb. net as against 94,818 bags produced in the previous season.

The sale of nearly all farm-grown maize, as differentiated from the native-grown maize, is handled by a Cooperative Society. This Society has secured a contract with mines in the Belgian Congo to sell maize to them at a fair but satisfactory price. This fact has established a local maize market for the time being and has been an incentive to increased production. The consumption of maize and maize-meal at the mines to the north of the farming area and in the Belgian Congo is increasing rapidly, but it is believed that the local farmers are in a position to produce, and will produce, sufficient for all requirements.

Tobacco growing has obtained a fresh impetus since the preference for Empire-grown tobacco was re-introduced, particularly in the Fort Jameson District. Many settlers are growing tobacco who have had no previous experience, but their results are satisfactory and the results obtained by experienced growers appear to be most profitable. It is believed that considerably more farmers will plant tobacco in the future.

The acreage planted with wheat in 1925 was 2,633 acres, and in 1926, 3,387 acres. The yields were respectively 9.895 and 11.687 bags of 200 lb. net. The chief reason for the substantial increase in acreage was due to the large amount of water available for irrigation purposes after the heavy rainfall in the previous summer months. A further contributory reason was the establishment of

a flour mill at the Cooperative Society's headquarters at Lusaka, which was expected to ensure increased profits to the growers.

Experiments have been continued at the Agricultural and Veterinary Experimental Station at Chilanga, but the facilities are too inadequate to allow the Government to expect valuable results. The diseases and other problems of cultivated crops and cattle are such that it is considered necessary that this should be thoroughly and methodically investigated. Therefore, the need for more land and better facilities has been so pressing that an Agricultural and Veterinary Research Station is in the process of establishment at a suitable site at Mazabuka.

The crops grown by natives are at present mainly confined to foodstuffs for their own consumption though, in certain districts, especially in the proximity of mines, additional quantities are grown for sale. Preliminary investigations have been made with a view to ascertaining whether other economic crops can be introduced to areas remote from the railway line and the mines to enable the natives to produce cash crops at their own villages. It is feared that little can be done in the matter without far more detailed investigations into the conditions and without trained demonstrators in such remote areas. At the present time agricultural education of an elementary nature is being given by various missionary societies, and grants for this purpose have been made to them by the Government.

It is realised that the building up of a sound native agricultural industry must be slow, in order to eliminate many of the risks liable to be incurred through erroneous advice due to inadequate opportunity to investigate agricultural problems in the remote areas. Further risks are liable to be incurred by sudden increase in production.

Owing to the existence of extensive tsetse fly belts, large areas of the Territory are closed to cattle. It has been found possible, however, to maintain ox-transport in the vicinity of certain of the new mining concerns, which are situated within tsetse fly belts, by the intravenous injection of sodium or potassium antimony tartrate. The palliative effect of the drug is sufficient to keep trypanosomiasis-infected cattle in work for considerable periods. Good results, in the curative treatment of the disease, still attend the administration, intravenously, of solutions of antimony tartrate and there is ample proof that, where animals are not again exposed to infection, many permanent cures are effected. The transportation of tsetse fly by motor vehicles constitutes a menace to the settled areas and calls for serious consideration.

In the Barotse district there are large numbers of cattle, almost entirely native-owned. Contagious bovine pleuro-pneumonia is enzootic in that district, but the measures in force to prevent its spread to the settled areas continue to be effective. An extensive inoculation scheme for the elimination of the disease from Barotse-land is contemplated.

In the remainder of the Territory there are approximately 216,981 native-owned and 90,245 European-owned cattle, the majority of which are unimproved. Grading-up by the use of good bulls of the improved breeds is practised by the more enlightened farmers and its results are noticeable in many parts of the Territory.

Although the native, generally speaking, is conservative and apathetic on the subject of improvement of his herds, there are indications that he is beginning to take more interest in animal husbandry. Every opportunity is taken by the staff of the Veterinary Department to impart the elementary principles of animal husbandry, to emphasise the deleterious effects of inbreeding and neglect of castration, and to foster the practice of selection and general improvement. Pedigree stock, imported from the Union of South Africa, is being used by the Veterinary Department for the foundation of a herd for the supply of pure-bred and grade stock to both Europeans and natives.

Owing to the high incidence of horse-sickness, only 75 horses are kept in the Territory. There are also 21 mules and 280 donkeys. No outbreak of glanders has occurred, and all equines must pass the mallein test prior to importation.

There are approximately 40,958 sheep, 68,979 goats, and 18,199 pigs.

A considerable trade in livestock for slaughter purposes is done with the Katanga Province of the Belgian Congo. The requirements of the local markets, especially in the mining areas, are increasing annually, and the supply of slaughter cattle from Northern Rhodesia is insufficient to meet the demands of the Katanga. The highest price obtained for slaughter stock within the Territory has been 35s. per 100 lb. (dead weight) and the average price about 29s. Native stock realised 22s. to 25s. per 100 lb. (dead weight).

A creamery has been established at Choma and has met with success. The farming community is coming to realise that dairying, with its products and by-products, is a valuable adjunct to mixed farming, and although Northern Rhodesia still imports dairy produce the local output is increasing.

The settled areas of the country are free from any of the sweeping epizootic cattle diseases. Energetic veterinary police measures have been successful in preventing the invasion of rinderpest from the north, East Coast Fever from the south, and contagious bovine pleuro-pneumonia from the west. Sporadic outbreaks of anthrax and quarter-evil occur, but they are promptly suppressed by quarantine, proper disposal of carcasses, and vaccination and inoculation. Skin diseases of stock yield to regular dipping, and dipping is responsible, too, for maintenance and improvement in the condition of cattle.

Apart from the Fort Jameson District of North-Eastern Rhodesia, in which a few cases of tuberculosis have come under notice,

this Territory would appear to be practically free from this disease. This latter fact may be regarded as one of the most valuable pastoral assets of the greater part of the Territory.

Some loss occurs from indigenous diseases of cattle, and experimental work on their incidence, aetiology, transmission, and treatment is being done. The elimination of these diseases would facilitate the process of grading-up by means of pedigree stock already referred to.

It is being more and more realised that Northern Rhodesia is a valuable cattle country and that, by means of paddocking and sound methods of herding, farms can be made to carry more stock according to their acreage than has hitherto been considered possible.

### B. Mining.

Though more mines were actually producing during the year under review than was the case in the preceding year, the period was again rather one of energetic development and investigation, the full results of which are not likely to be apparent for some years. The general position remains extremely hopeful.

The Rhodesia Broken Hill Mine produced lead, zinc, silver, and vanadium. The Jessie Mine produced gold and a small quantity of silver. The Bwana M'Kubwa Mine, though handicapped by certain unforeseen difficulties in making the new plant entirely effective, recommenced the production of copper. The Sachenga, Star 2, and Camarnor Mines produced small quantities of mica, zinc ore, and vanadium ore respectively. Considerable development work was also done at the Broken Hill, Bwana M'Kubwa, Nkana, Nchanga, Mtuga, and Roan Antelope Mines; and the Rhodesia Congo Border Concessions, the Rhodesia Minerals Concessions, and the Camarnor Syndicate carried out intensive prospecting operations.

The producing mines employ some 640 Europeans and 5,700 natives; but there are probably another 180 Europeans and 4,000 natives employed on the prospecting operations.

The following is a statement of the actual production for the year together with the value of the minerals produced :—

	Value.
	£
Gold (778 ounces) ... ..	3,238
Silver (114 ounces) ... ..	11
Copper (708 tons) ... ..	27,353
Lead (3,835 tons) ... ..	68,570
Mica (3½ tons) ... ..	833
Zinc (235 tons) ... ..	3,766
Zinc Ore (485 tons) ... ..	1,745
Vanadium (26 tons) ... ..	6,044
	<hr/>
	£111,560
	<hr/>

In addition, the industry was credited with £988, the value of silver contained in lead mined in 1924 and 1925, and with £40,676 in respect of vanadianite produced in 1925. Adjustments were also made in lead values in respect of 1924 and 1925 production amounting to £162,167, and in zinc values in respect of 1925 production amounting to £2,665.

Preparations were made by the Rhodesia Congo Border Concession Company for an aerial survey over a large portion of their concession area, and the survey was to be commenced as early in 1927 as climatic conditions allowed.

### C. Industry.

The only industrial establishment in the Territory, at present, is the Zambesi Saw Mills, Limited, which has a sawing plant at Livingstone. The Company has been granted concessions over certain forest areas to the north-west of Livingstone, and the timber cut therein is brought down to the mills by means of a light railway some 40 miles in length. The Company has a contract for supplying sleepers to the South African Railways, and it also supplies most of the requirements of the Rhodesia Railways. Forty-five Europeans and about 1,500 natives are now employed in this industry.

There is a fishing and fish-curing industry carried on by natives on the banks of Lakes Mweru and Bangweulu. A ready market for dried fish is found on the Katanga Mines and with one or two European traders who are established in the vicinity, and the industry, though naturally limited, continues to flourish. There is also a small trade in dried fish on the Kafue River near the railway line and in the Zambesi valley. Natives in the swamps to the south of Lake Bangweulu carry on a considerable trade in otter skins. There is also a native salt industry in the Mpika and Chiengi sub-districts, and to a lesser extent in the Kasempa sub-district; while in various districts a considerable trade in native tobacco is carried on. But the fact remains that, apart from the limited activities noted above and the production of food crops, the old native industries have been killed by the importation of articles of European manufacture. It is not worth while to smelt iron nowadays when scrap iron can be picked up anywhere. Pottery has been replaced by the enamel basin and jug, and other industries have suffered in the same way. There is no longer a market for the old native trade goods: they have passed out of date.

## CHAPTER IV.

### TRADE AND ECONOMICS.

Northern Rhodesia is in the curious position of being divided into two Customs zones. The northern zone, which is known as the Congo Basin zone, is governed by the conditions of the Berlin Act of 1885. Goods imported into this zone, therefore, are not

subject to the terms of the Agreement with Southern Rhodesia and the Union of South Africa, though the duties imposed are in almost all instances similar to those imposed in the southern zone, except that equality of trade is granted to all nations. The Zambesi Basin zone, as the latter is called, is subject to Customs Agreements with Southern Rhodesia, with the Union of South Africa, and with the High Commission Territories of Bechuanaland, Basutoland, and Swaziland. Under the existing Agreement, Northern Rhodesia receives 12 per cent. *ad valorem* on removals from the Union of South Africa of imported goods, and 6 per cent. on removals of South African manufactured goods; unmanufactured produce of South Africa is not subject to duty. The Union of South Africa charges the actual duty at Union rates on removals from Northern Rhodesia of imported goods, but allows entry to Northern Rhodesia produce free of duty. The minimum sum payable by the Union to this Territory is £12,500 per annum.

The following table shows the value of the imports and exports for the year 1926 from and to other countries, and also the corresponding figures for the preceding year :—

	1926.		1925.	
	<i>Imports.</i>	<i>Exports.</i>	<i>Imports.</i>	<i>Exports.</i>
	£	£	£	£
Union of South Africa ...	166,001	161,439	97,648	127,130
Southern Rhodesia ...	258,884	65,543	171,482	34,916
United Kingdom and other British Possessions.	818,718	142,761	760,017	91,900
Total British Empire ...	£1,243,603	£369,743	£1,029,147	£253,946
Foreign Countries ...	423,981	112,728	254,878	178,046
Total Merchandise ...	£1,667,584	£482,471	£1,284,025	£431,992

This shows the percentage of trade to be :—

			1926.	1925.
			Per cent.	Per cent.
Union of South Africa ...	...	...	9.96	7.60
Southern Rhodesia ...	...	...	15.52	13.36
British Empire ...	...	...	49.1	59.19
Total British Empire ...	...	...	74.58	80.15
Foreign countries ...	...	...	25.42	19.85
			100	100

The gross Customs and Excise revenue for the year amounted to £102,254, an increase of £16,687 on the figure for 1925.

The principal articles imported during 1926 were :—

	£
Animals (Living) ... ..	44,530
Foodstuffs ... ..	148,733
Ales ... ..	54,088
Ales (Non-potable) ... ..	474
Tobacco ... ..	27,519
Textiles ... ..	376,527
Metals ... ..	576,982
Minerals ... ..	104,515
Oils ... ..	76,482
Drugs ... ..	55,580
Leather ... ..	30,522
Wood ... ..	56,087
Books ... ..	19,703
Jewellery ... ..	24,470
Miscellaneous ... ..	71,372
	<hr/>
	£1,667,584
	<hr/>

The principal articles exported were :—

	£
Animals (Living) ... ..	52,606
Hides, Skins, and Horns ... ..	15,591
Ivory ... ..	7,117
Butter ... ..	1,219
Maize ... ..	31,246
Wheat ... ..	18,575
Maize Meal ... ..	10,566
Pulse ... ..	497
Tobacco (Unmanufactured) ... ..	155,832
Cotton (Raw) ... ..	4,746
Ores—	
Copper ... ..	23,566
Lead ... ..	43,284
Vanadium ... ..	4,498
Other ... ..	2,047
Gold ... ..	2,697
Silver ... ..	16
Lime ... ..	1,072
Timber (Unmanufactured) ... ..	64,794
Curios ... ..	505



## CHAPTER V. COMMUNICATIONS.

### A. Railways.

The principal means of communication is the railway, which, after leaving Livingstone, runs in a north-easterly direction, dividing the country into two nearly equal portions. It is owned partly by the Rhodesia Railways Company, partly by the Mashonaland Railway Company, and partly by the Rhodesia-Katanga Junction Railway and Mining Company, but it is run under the same management as the Beira and Mashonaland Railways, and, together with these, forms in effect a single railway system which stretches from Vryburg in Bechuanaland and from Beira in Portuguese East Africa through Southern Rhodesia and through Northern Rhodesia to Sakanian in the Belgian Congo. A single line enters the Protectorate by means of a remarkable bridge spanning at a height of nearly 400 feet the River Zambesi at the gorge some 200 yards below and within sight of the Victoria Falls; it passes Livingstone, crosses the Kafue at the station of that name, and enters the Belgian Congo slightly north of Ndola. The total length of line within the Territory is 507 miles, and there are no branch lines.

### B. Roads.

With the exception of the short road known as the Jameson Road from Livingstone to the Victoria Falls, a distance of seven miles, and the private road of the Broken Hill Mining and Development Company leading from their plant and mine to the hydro-electric power station on the Mulungushi River, some thirty-six miles away, there are no macadam-constructed roads in the country, and these only can be described as "all-weather" roads. All the other roads are earth-roads, and though the smaller rivers are bridged with bush-timber bridges, and the roads embanked and sometimes gravelled where they cross marsh land, traffic is liable to be interrupted for at least two months in the year, usually in February and March.

In the last two years the mileage of roads passable for from eight to ten months in the year has very considerably increased; and, during the season when they are open, these roads compare very favourably with roads in Southern Rhodesia or the Union of South Africa. The following are the main lines of road now open:—

The Great North Road runs from the Victoria Falls via Livingstone, Mazabuka, Lusaka, Broken Hill, Serenje, Mpika, Chambesi River, where the crossing is effected by pontoon, and Kasama to Abercorn, a distance of about 1,000 miles. It is intended to effect a junction between this road and the Tanganyika road system, and it will then provide direct communication between East and South Africa.

The Rhodesia-Congo Border Road leaves the Great North Road at Kapiri Mposhi, and runs in a north-westerly direction via Ndola, Nkana, and Nchanga to Solwezi, a distance of about 312 miles. A branch road gives access to the Belgian Congo and Elisabethville.

From Solwezi a road runs in a south-westerly direction to Kasempa. It is proposed to extend this to Mumbwa, which is already connected with the Great North Road.

A road, known as the Great East Road, is in course of construction from Lusaka to Fort Jameson, and it is hoped to complete this by the end of 1928.

Communication with the Mweru-Luapula District is maintained by a road that crosses the *pedicule* of the Belgian Congo from Ndola to Kapalala.

All these roads have numerous branches leading to farms, mission stations, or other points of European settlement in the various districts through which they pass.

The authorisation of the East African Loan, in which Northern Rhodesia will share, has made possible the production of a comprehensive scheme of arterial road construction, which will include the improvement of the roads mentioned above. The development of the six-wheeled lorry and the roadless tractor is being watched with interest: and it is anticipated that the next few years will see a complete revolution in the existing transport position. Very great development is to be expected in all branches of communications.

### C. Posts, Telegraphs, and Telephones.

A line carried over the Railway Company's poles affords telegraphic communication between the Victoria Falls Bridge and the Belgian Congo and between the intervening stations. The line from Livingstone to Broken Hill is double, while the remainder is single, the total length of wire being 894 miles. There is also a telegraph line from the Nyasaland border to Abercorn, and another from the same border further south to Fort Jameson; the length of wire, which is single, being 149 and 6 miles respectively. Abercorn is also connected with Kasama by telephone, a distance of 100 miles.

A telephone service exists at Livingstone, and this is to be extended in the near future, as the demands for telephonic facilities have far outgrown those which the Post Office can provide. There is a trunk line from Livingstone to the Victoria Falls Hotel on the Southern Rhodesian side of the Zambesi.

Postal work shows a considerable increase and once more reflects the progress that the country has made. During the year, stamps and embossed stationery were sold to the value of £13,492, as compared with £12,883 in the preceding year. Money orders were issued to the value of £29,488, and £19,648 was paid out in respect of money orders issued elsewhere. The corresponding

figures for the preceding year were £24,770 and £16,240. Postal orders issued numbered 35,448 and were worth £19,895, while £7,843 was paid out in respect of 13,429 postal orders. The cash-on-delivery system was used by an increased number of persons, and 2,534 packets, valued at £10,105, were dealt with under it. 13,483 articles were undelivered and passed through the Returned Letter Office. The following table shows the quantities of the various kinds of mail matter received and despatched during the year as compared with the figures for the preceding year:—

*Received.*

	1925.	1926.
Letters ... ..	1,081,340	1,489,982
Postcards ... ..	25,688	22,308
Newspapers ... ..	392,080	401,540
Bookpackets ... ..	191,048	354,042
Parcels ... ..	34,996	33,370
Registered articles ... ..	32,916	37,154

*Despatched.*

	1925.	1926.
Letters ... ..	1,108,226	1,464,696
Postcards ... ..	32,376	33,540
Newspapers ... ..	49,400	54,574
Bookpackets ... ..	126,880	124,418
Parcels ... ..	8,944	6,162
Registered articles ... ..	29,900	34,984

## CHAPTER VI.

**JUSTICE, POLICE, AND PRISONS.**

Justice is administered by the High Court of Northern Rhodesia, and by the Magistrates' and Native Commissioners' Court, subject to appeal to and review by the High Court.

During the year, the High Court dealt with 89 civil matters, as against 57 in the preceding year, and heard eight actions and two appeals. Two petitions in bankruptcy were presented. Sessions were held at Broken Hill in January, at Mazabuka in October, and at Kalomo and Choma in November. Fifteen criminal cases came before the Court, exclusive of reviews of judgments in the lower Courts. These latter numbered 329, of which 161 were confirmed, 39 quashed, 83 altered, one sent back and subsequently approved, two returned with direction as to sentence; in the remaining 43 cases the accused were bound over.

The Criminal Investigation and the Town and District branches of the Northern Rhodesia Police were involved in 3,715 prosecutions, as compared with 3,476 in 1925. In addition to these, a

few cases are tried at stations where there are no Police; nor do these figures include the very large number of prosecutions for offences against the Native Tax Law.

The following figures show the convictions for the more serious crimes :—

Murder	...	...	...	...	...	...	...	39
Manslaughter	...	...	...	...	...	...	...	8
Arson	...	...	...	...	...	...	...	7
Forgery	...	...	...	...	...	...	...	12
Perjury	...	...	...	...	...	...	...	10
Housebreaking	...	...	...	...	...	...	...	21
Burglary	...	...	...	...	...	...	...	8
Rape, attempted rape, and assault with intent to rape	...	...	...	...	...	...	...	16
Indecent assault	...	...	...	...	...	...	...	15
Assault causing bodily harm	...	...	...	...	...	...	...	117

Thirty-two out of the thirty-nine sentences of death were commuted to various terms of imprisonment. In the remaining seven cases the law took its course.

Of the total number of persons accused of crime, 92 per cent. were convicted.

There are five central prisons, at Livingstone, Broken Hill, Fort Jameson, Kasama, and Mongu; and there are 30 local prisons at various out-stations. During the year, 5,933 persons were committed to prison, 35 of whom were to serve sentences of five years or more. The daily average of persons in prison was 691. Thirty-six deaths occurred among the prisoners.

## CHAPTER VII.

### PUBLIC WORKS.

During the year 1926-27 the sum of £32,105 was spent on construction. The only buildings of any importance that were completed during this period were the Legislative Council Chamber and the new block of offices for the Judicial and Legal Departments. Both of these buildings were very badly needed in Livingstone.

As regards road construction, the most important work was done on the track of the Great East Road from Lusaka for a distance of 140 miles. Six permanent bridges, averaging over 100 feet in length, were constructed.

A permanent iron bridge was constructed over the Maramba River, which has enabled communication by road between Livingstone and the Victoria Falls to be continuous throughout the year, whereas formerly it was apt to be interrupted during three or four months of the wet season. A similar bridge was constructed over the Chichikwenkwe and Mulungushi Rivers on the Great North Road.



A permanent pontoon capable of carrying 1,500 pounds was constructed over the Lunsemfwa River on the Broken Hill-M'kushi road. A considerable amount of road work has been done by the Mining Concession Company with the object of bringing up communications between the railway line and the more important points in their respective areas.

## CHAPTER VIII.

### PUBLIC HEALTH.

During the year, 778 Europeans and 6,434 natives were treated in hospital, and there were 28 and 326 deaths respectively among these. Complete returns of out-stations are not available for either European or native population. Native patients at out-stations number 5,000. A very large proportion of these are treated for trivial complaints. A localised outbreak of sleeping sickness occurred in several villages on the Mwangazi River south of Fort Jameson and near the Portuguese Border. Twelve cases of trypanosomiasis were found and the villages were moved from fly area to a fly-free area. No further cases have been reported among these people since they were moved. Of the 12 cases treated in the Fort Jameson Hospital, 4 died, 1 suffered a doubtful relapse, and 7 were apparently cured. Three other cases of trypanosomiasis occurred in the neighbourhood of Msoro, but it was not possible to find whence the infection had come.

During the year, 262 persons were admitted into hospital with malaria and 21 with blackwater fever, one of the former and seven of the latter died. The admissions for the previous year were 211 and 13 respectively. The increased admission rate may be accounted for partly by the increase in population, partly by the ignorance and carelessness of a number of immigrants, who were also compelled by circumstances to live in unsatisfactory conditions, and partly by the very heavy rainfall of the previous season in certain parts of the country, which resulted in the breeding of mosquitoes on an unusually large scale.

Influenza has been endemic throughout the Territory and in a few instances it assumed epidemic proportions amongst the native population over limited areas. This disease has persisted since the severe 1918 epidemic, especially at Broken Hill, where it has manifested peculiar characteristics.

Treatment of yaws with bismuth and sodium tartrate has been actively carried out and is being gradually exterminated by the help of various missionary societies and trained native orderlies. The high prevalence of the disease is in the Kasempa, Kafue, and Luapula areas.

The outbreak of smallpox which had occurred in the Mweru-Luapula district in 1925 continued in 1926 and 291 cases were

reported. Five cases also occurred at Broken Hill and ten were reported from the Mwinilunga sub-district.

Ankylostomiasis is widely distributed but it has not been possible to carry out a comprehensive survey or to institute intensive treatment except over restricted areas. As an indication of its prevalence, the routine examination of a single stool by the flotation method in 193 native patients irrespective of disease in the Livingstone Hospital showed ankylostoma ova in 89.9 per cent. Treatment with carbon tetrachloride is being carried out at various centres.

General health of the European population remained good. Sixty-two deaths occurred in 1926, being a death-rate of 11.1 per 1,000. Seven infants in one year died, which represents 49.3 per 1,000 of the total birth-rate for the year. One hundred and forty-two children were born, 69 being males and 73 females, which represents a crude birth-rate of 25.4 per 1,000. Of 369 officials resident in the Territory in 1926, 54 appeared on the sick list, with a total number of days on the sick list of 735. One officer died from general peritonitis due to injury.

## CHAPTER IX.

### EDUCATION.

#### European Education.

There are six Government schools, five farm schools, and one aided school, of which all, except one at Fort Jameson, are situated on or near the railway line. Two of the Government schools, those at Kalomo and Mazabuka, have boarding houses attached to them with accommodation for 44 children.

Twenty-five teachers were employed in the schools. The total enrolment at all schools at the close of the school year, 16th December, 1926, was 417, of whom 215 were boys and 202 girls, an increase of 20 in the number at the 31st December, 1925.

#### Native Education.

The year 1926 was occupied mainly in initiating and developing among the various missionary societies the policy decided on after the meeting of the Advisory Board in July, 1925. The most pressing requirement was and continues to be the training of competent native teachers and instructors. Until this is achieved, general progress on a large scale is impossible.

A meeting of the Standing Committee of the Advisory Board was held at Livingstone in November. Some of the chief matters discussed were the allocation of grants-in-aid of educational work for the year 1926, the exemption from tax of school pupils, the education of half-caste children, the native welfare scheme at Broken Hill, and the examination for teachers' certificates,

One District Advisory Board has been established for the Mweru-Iluapula District with the District Commissioner as Chairman. The Director of Native Education met this Board, which included representatives of five different Societies, at Mbereshi in December.

The Native Reserves Commission, which was travelling during the months of September and November, took evidence with regard to educational problems from many members of the community, and its report, which is not yet published, will be of considerable interest.

An attempt has been made to inaugurate a Welfare Scheme with facilities for education and recreation for the natives of Broken Hill, but it has not been possible to proceed with it immediately owing to the Mine not being ready to cooperate.

The school of agriculture and animal husbandry which the Dutch Reformed Church started at their Magwero Station in the Fort Jameson District is now well established and promises to do useful work.

In the absence of an inspectorate, Government supervision for the year has had again to be confined to such visits to mission stations as the Director of Native Education was able to make. He visited the Barotse District and some of the North-Eastern Districts.

The outlook for Native Education is distinctly hopeful, since the wish for improvement is undoubtedly present among the natives and the will to help them has been made manifest and is increasing.

## CHAPTER X.

### LANDS AND SURVEY.

During 1926, 193 inquiries regarding land settlement in Northern Rhodesia have been received, but only three of these came from the United Kingdom. In addition to the above, 127 inquiries were dealt with for surveyed plots at sidings and townships, 13,992 acres were alienated in permit of occupation, the total purchase price being £2,754. Twenty-five titles to farms were issued during the year in respect of 93,728 acres and 19 titles to township plots. Thirty-six plots were leased and 27 other leases were issued in respect of areas of land. Two of these were leased to the Zambesi Saw Mills, Limited, covering an area of approximately 1,400 square miles, over which the Company is entitled to cut timber upon payment of royalty.

Survey work was done at Lusaka in connexion with a scheme for draining the compound, which is apt to be flooded during the wet season. An inspection of Boundary Pillars I-XII on the Anglo-Belgian Boundary was effected. A special survey was required by the Native Reserves Commission and an additional surveyor was engaged for this specific work. Residential plots

at Livingstone, Lusaka, Kapiri Mposhi to the number of 103 were surveyed and also certain farms where a demarcation of boundaries was to be opened.

There has been no geological survey other than that done by the mining companies in the course of their prospecting operations.

## CHAPTER XI.

### LABOUR.

The increased activity in the mining world has provided the native population with opportunities for work within Northern Rhodesia which were formerly lacking. The inevitable effect of the increased demand for native labour is to make it necessary to offer at least as attractive conditions as the native can obtain in other places. It is satisfactory to be able to report that the mines in this Territory offer sufficiently attractive conditions in the way of wages, rations, and housing to enable them to obtain all the native labour that they require without having to resort to recruiting organisations. The same cannot be said of the farmers, but in present circumstances it would be almost impossible for many farmers to offer the same standard as is to be obtained on the mines. There is sufficient labour available in the Territory to serve all the mines and farms if the conditions are made sufficiently attractive. In the East Luangwa District a number of Nyasaland natives have sought employment, but speaking generally the Nyasaland native appears to prefer to make the longer journey to Southern Rhodesia to working on the East Luangwa farms. The railways and their various contractors have little difficulty in obtaining local labour. The wages offered are good and a generous scale of diet attracts and retains labour. Apart from those who find work within the Territory, a considerable number prefer to take their labour to other markets. The Rhodesian Native Labour Bureau is permitted to recruit a limited number of Northern Rhodesia natives for work in Southern Rhodesia, and Messrs. Robert Williams and Company a rather larger number for the copper mines in the Katanga District of the Belgian Congo. These recruiting organisations are subject to conditions which ensure that natives recruited by them will not only be well looked after on their journey to and from their place of work, and during the time spent there, but also will receive a certain proportion of their wages in the form of deferred pay which they get on return to their homes, so that they do not return with nothing to show for their labour and their absence. During 1926, the Rhodesian Native Labour Bureau recruited 4,882 Northern Rhodesia natives and repatriated 7,104; while Messrs. Robert Williams and Company recruited 4,609 and repatriated 6,376. The natives so repatriated by these two organisations received £54,295 in deferred pay. Probably an equal



number of natives leave the country to find work voluntarily, i.e., not under the auspices of a recruiting organisation, and travel to Tanganyika Territory, to the Belgian Congo, to Southern Rhodesia, and even to the mandated territory of South West Africa in search of work and, very likely, in the hope of adventure.

## CHAPTER XII.

### MISCELLANEOUS.

The First Session of the Second Legislative Council was opened on 14th September, 1926, and sat until 28th September. Twenty-three Ordinances were passed, of which one, the Maize (Local Option) Ordinance, was disallowed until its necessity had been thoroughly proved.

Of the other Ordinances passed, the more important were the Northern Rhodesia Police Ordinance, largely a consolidating measure, the Income Tax Ordinance, which was introduced for the purpose of assimilating as far as possible the Northern Rhodesia Income Tax legislation to the provisions of the Model Ordinance proposed by His Majesty's Government for general adoption in the non-self-governing Colonies, Protectorates, etc., and the Civil Servants Ordinance, introduced to replace the Ordinance passed at the 1925 Session, which, it was found, gave insufficient protection to certain existing rights. Of the remaining Ordinances, some were small amending Ordinances designed to rectify imperfections in previous legislation, and of the others several were introduced in order to meet wishes expressed in the last Legislative Council.

C. H. DOBREE,

*Acting Chief Secretary.*

LIVINGSTONE,

*2nd February, 1928.*

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### Historical.

St. Helena was discovered by the Portuguese Commander Juan de Nova Castella on St. Helena's Day, 21st May, 1502, during his return from India with a squadron of three Portuguese vessels.

The Portuguese did not colonise the Island but were satisfied in keeping secret its situation until 1588, when it was visited by Captain Cavendish on his return from a voyage round the world.

The Dutch entered into possession of the Island and held it from 1645 to 1650, when they preferred to establish themselves at the Cape of Good Hope. St. Helena was thereupon occupied by the East India Company and a Charter for its administration was granted in 1661.

In 1665, according to some accounts, the Island was captured by the Dutch, who were expelled the same year. Again they seized it in January, 1673, but only held it until May of that year, when they were finally driven out by Captain Sir Richard Munden of the King's Navy.

In December, 1673, a new Charter was issued to the East India Company and, with the exception of the term of Napoleon's exile.

the Island remained under the Company until 22nd April, 1834, when it was brought under the direct administration of the Crown.

An instrument entitled "The Laws and Constitution of the Island of St. Helena" was issued by Charles II in 1681. This document, bearing the seal of the East India Company, is still in the possession of the Governor of St. Helena, as are also the records of the Colony from 1678 to the present day.

The outstanding feature in the history of St. Helena is its connection with the exile of the Emperor Napoleon. The house occupied by him at Longwood, and the tomb in which his remains lay for 20 years till their removal in 1840, are maintained by the French Government, who were granted a freehold in 1858.

Apart from its Napoleonic associations, St. Helena has an interesting history and the Island has fluctuated between extreme poverty and comparative prosperity almost since its occupation.

It was chiefly celebrated in the East India Company's days as a port of call and refreshment house between England and India. Large quantities of fruit and vegetables were grown for the provisioning of ships calling. Records show that upwards of 900 ships were entered at the port annually. The opening of the Suez Canal sounded the death-knell of St. Helena as a shipping port and from that time shipping has gradually declined. The average number of ships now calling is about 40 per annum.

St. Helena has intimate associations with the suppression of the slave trade between West Africa and the Americas.

Slave ships captured by the British warships were brought to St. Helena for condemnation, and a settlement for freed slaves was founded at Rupert's Bay. A few took service in the Island but about 10,000 were conveyed to the West Indies and British Guiana.

During the Boer War of 1899-1901 St. Helena was used as a place of incarceration for prisoners of war, and upwards of 4,000 were detained in the Island. This necessitated a garrison of about 3,000 troops.

For a few years after the repatriation of the Boer prisoners a garrison was maintained at St. Helena. Its withdrawal in 1906-7 caused considerable hardship among the population, who had learnt to depend on the garrison for their livelihood. The departure of the troops was not, however, an unmixed evil, for it threw the Island on its own resources and led to the creation of the flax industry on which the prosperity of the inhabitants now so greatly depends.

A lace industry has been established since 1907, and gives employment to a number of women and children.

St. Helena was visited in 1910 by His Royal Highness the Duke of Connaught on his way to open the first Parliament of the Union of South Africa, and in 1925 it had the honour of a visit from His Royal Highness the Prince of Wales, who remained for two days on his way from South Africa to South America.



### Geographical.

St. Helena lies in latitude 15.55 South and longitude 5.42 West. It is about 950 miles due south of the Equator, 4,000 miles from England, and 1,700 miles from Cape Town. The voyage from England occupies 17 days, and from the Cape 6 days.

The area of the Island is 47 square miles; there are about 60 miles of roads.

The aspect of St. Helena from the sea is forbidding. It rises abruptly in bare cliffs, which vary from 450 to 2,400 feet in height. The face of this wall of rock is cut by deep, narrow gorges.

Above the cliffs the ground rises in a fairly regular slope, but with numerous valleys, to a ridge lying across the middle of the Island. This ridge is serrated in form; its general altitude is about 2,000 feet, but two of its peaks, easily accessible and affording magnificent views, rise to 2,700 feet.

The Island has been divided into three zones, "Coast," "Middle," and "Central."

The "Coast" zone extends from about a mile to a mile and a-half round the Island. Except in some of the valleys, where fruit and vegetables may be grown, the only vegetation is prickly pear.

The "Middle" zone, at an altitude of 400 to 1,800 feet, succeeds the "Coast" zone. The hills and valleys and pleasing scenery in the higher levels of this area are suggestive of parts of Wales and Devon. Oaks, Scotch pines, gorse, and blackberries flourish there, and in 1926 at Plantation during a prolonged winter some primroses made their appearance. It is the pleasantest part of the Island in which to live and it contains Plantation (Government House), Bishopsholme, Rosemary Hall, Princes Lodge, Longwood, and other residences.

The "Central" zone, about three miles long by two miles wide, is ground each side of the central ridge, the highest ground in the Island. In some parts the ground is precipitous, in others undulating with grassy slopes.

The population of the Island is about 3,700, of whom about 1,500 live in Jamestown, the capital, situated in the "Coast" zone, while the rest dwell in the "country," as the other two zones are locally designated.

Transport is by horse, either driven or ridden. Owing to the hilly nature of the country the rate of progress is slow, but time is rarely of the essence of any undertaking in St. Helena. The drive, for instance, from the town to Plantation or to Longwood, where the golf links are, or from Plantation to Longwood, in each case a distance of five miles, occupies an hour and a-quarter. The introduction of motor transport is under consideration.

### **Ascension Island.**

Ascension Island, lying in latitude 7.53 South and longitude 14.18 West, about 700 miles north-west of St. Helena, was discovered by the Portuguese on 20th May, 1501. It became noted for its abundance of sea fowl and excellent turtle, the latter "Freeing sailors entirely from the scurvy and other diseases of the blood."

The Island was occupied by the British in 1815 at the time Napoleon was a prisoner in St. Helena. In 1821 the garrison was formed of marines, and the Admiralty continued control over the Island until 12th September, 1922, when Ascension became a Dependency of St. Helena.

At the present time the Eastern Telegraph Company have a station there, and officers of the Company are invested with certain administrative powers.

A company has been formed to exploit the guano and phosphate deposits of the Island, but the export has not yet assumed large proportions.

Ascension has an area of 34 square miles; it is of volcanic origin, and its appearance from the sea is rugged and desolate. Green Mountain, however, 2,800 feet high, relieves, with its vegetation, the barren and depressing aspect of the larger part of the Island, and affords pasture for a certain number of sheep and cattle.

The pure and dry air of Ascension has given its climate a reputation for being singularly healthy.

### **General.**

The question of the rehabilitation of agriculture and horticulture in St. Helena has occupied the attention of Government for some time.

During the year under review the Colony was fortunate in that its agricultural and forestry possibilities excited the interest of Mr. Davy, Deputy Director of Agriculture, Nyasaland, and of Mr. Legat, Chief Conservator of Forests to the Union Government of South Africa.

The result of the interest thus aroused was a brief visit from Mr. Davy, which has been followed up by correspondence and the receipt of seeds and literature; and an interesting correspondence with Mr. Legat.

Under date 1st August, His Excellency the Governor addressed a despatch to the Secretary of State on the subject of the appointment of a Horticultural or Agricultural Officer, an appointment which has now been sanctioned. In this despatch His Excellency dwelt at length on the past agricultural and horticultural history of the Island and quoted from the reports of Sir Daniel Morris, who reported on the agricultural possibilities of the Island in 1884, and that of Mr. Mason, who rendered a similar report in 1921.

The despatch was printed and copies were supplied to all land-owners and other persons interested in the agricultural possibilities of the Colony.

Another important subject that was dealt with at great length during the year was the question of the introduction of motor transport.

Under Ordinance No. 2 of 1919 the use of motor transport is practically prohibited, and under the conditions thus established, transport has to be effected by horse, ox and donkey. The horse is used chiefly for personal transport and for the handling of small merchandise. Oxen are used for heavy loads, and while ox transport is cheap it is very slow and cumbrous. Donkeys are largely used for the conveyance of " flax " leaves from the place of cutting to the mills. They are also very largely used by the " country " people for the transport of their own marketing. Donkeys will never be displaced in any economic scheme in St. Helena. They cost practically nothing to keep and they carry an astonishing load into places that neither motor, horse nor ox could possibly reach.

The chief consideration in the matter of introducing motor transport was that of roads, and this question had two aspects, i.e., grade and width. The roads of St. Helena are very largely mountain roads and are both steep and narrow. A large amount of correspondence took place between St. Helena and other Colonies on the subject of road conditions, and much assistance was afforded by those Colonies that were approached on this subject. Within the Island itself something was done in the way of road survey and the plotting of gradients, etc.

Under date 11th August His Excellency the Governor addressed a despatch to the Secretary of State reviewing the whole question of motor transport, and under date 28th October the Secretary of State authorised the repeal of Ordinance No. 2 of 1919. Subject to the repeal of this Ordinance and to regulations about to be framed, motor transport will be permitted in the Island.

This despatch was printed for public information.

Important work in connection with land titles was undertaken during the year. For some considerable time certain confusion had existed owing to the obscurity of some of the land records. The land registers have now been reviewed, and, with the exception of a few outstanding queries, the status of all properties has been determined.

The question of infant welfare has received considerable attention during the year. A complete medical and dental examination of all school children has been carried out. In the case of the medical examination the results are highly satisfactory; the dental condition of the children, however, leaves much to be desired.

St. Helena was noted in the past for its good and abundant water-supply

Captain Breckman, describing St. Helena in the account of his voyage to Borneo, 1715. observed, "The greatest convenience of this Island for ships is the plenty and goodness of the water." During the year the question of the supply of water to shipping was under consideration. The existing facilities were unable to meet the existing or possible demand, and it is proposed to erect additional storage tanks on the wharf.

The improvement of the water-supplies in the country districts is also engaging the attention of Government.

### I.—Financial.

#### REVENUE AND EXPENDITURE.

The revenue for the year amounted to £17,986 exclusive of any grant-in-aid, showing a decrease of £3,458 as compared with 1926. It will be borne in mind that in 1926 the outstanding assets of the Government Flax Mill were absorbed by the Colonial Government, and cypress timber purchased in 1925 was brought into revenue. These two items amounted to £8,323; thus, apart from this extraordinary figure, the revenue for 1927 shows a decidedly healthy aspect.

There was a grant-in-aid of £2,500 to general revenue.

Expenditure amounted to £16,740 showing a decrease of £6,414 as compared with that of the previous year, in which £7,727 doubtful assets were written off.

The revenue as compared with expenditure is therefore :—

	£
Total Revenue ... ..	20,486
Total Expenditure ... ..	16,740
	<hr/>
Surplus ... ..	£3,746
	<hr/>

Statement of revenue and expenditure for the past five years :—

	<i>Revenue.</i>	<i>Expenditure.</i>	<i>Grant-in-aid.</i>
	£	£	£
1923 ... ..	11,509	13,959	—
1924 ... ..	16,727	14,182	4,000
1925 ... ..	21,731	19,566	7,000
1926 ... ..	23,945	23,154	2,500
1927 ... ..	20,486	16,740	2,500

#### ASSETS AND LIABILITIES.

The statement of Assets and Liabilities shows an excess of Assets over Liabilities amounting to £8,701.

#### CURRENCY.

Bills of Exchange on the Crown Agents for the Colonies issued during 1927 amounted to £14,148, as against £15,794 in 1926.

£391 in specie was exported during the year.

## REMITTANCES.

£5,184 was remitted to the Crown Agents during the year, the main bulk being in the form of Bills on His Majesty's Paymaster-General.

## CROWN AGENTS FOR THE COLONIES.

For many years past there has been an overdraft with the Crown Agents, but it is pleasing to note that for the year under report £4,000 was advanced to the Crown Agents at interest and £500 deposit at call. That is to say, on 31st December, 1927, the Crown Agents held £4,500 of the Colony's money, whilst the Colony owed them only £34.

The following figures show the state of the Colony's overdraft, advance and cash balance at the Crown Agents for the past five years :—

		Overdraft.	Cash.
		£	£
December 31, 1923	... ..	7,500	Dr. 501
December 31, 1924	... ..	1,500	Dr. 478
December 31, 1925	... ..	1,500	Cr. 607
December 31, 1926	... ..	500	Cr. 530
Advance to Crown Agents			
December 31, 1927	... ..	4,500	Dr. 34

## II.—Production.

## AGRICULTURE.

The only agricultural product of any importance in St. Helena is *Phormium Tenax*, from which the fibre known as New Zealand flax is produced.

The quality of the fibre remained constant during the year. It is estimated that there are 2,000 acres under flax cultivation.

*Botley's Lay*.—The revenue derived from the Government pasture lands at Botley's Lay or Common amounted to £92 11s. 7½d., while expenditure amounted to £75 4s. 2d. The chief items of expenditure were the wages of the shepherd and the rent and rates.

*Maldivia Gardens*.—The sale of fruit from Maldivia Gardens produced £32 5s. 5d., against an expenditure of £46 14s. 6d. The chief item of expenditure was wages.

*White Ants*.—An intensive campaign against white ants within the grounds of Government House was undertaken during the year, and was attended with marked success.

An area within a radius of about 200 yards of Government House was selected for operations, and within this area about 60 nests have been destroyed and about 250 trees chemically treated. The result, it is hoped, will tend to the practical elimination of the pest within the area of operations.

**III.—Trade and Economics.****CUSTOMS REVENUE.**

The Customs revenue collected during 1927 amounted to £5,011 10s. 6d., as against £4,999 18s. 9d. in 1926, showing a small increase of £11 11s. 9d.

Increases of revenue appear under :—

Duty on Imports £71 4s. 11d. An increase in the consumption of spirits and cigarettes accounts for this.

Water £74 4s. The shipping agents, on the understanding that the Government would reduce the dues on water supplied to shipping, imported a 70-ton water-boat. The dues were reduced from 2s. to 1s. per ton under amending Ordinance No. 1 of 1927, which came into operation on 8th June. The results have justified this reduction.

Increases of £3 1s. 0d. and £1 13s. 0d. are found under Permits and Warehouse Rent respectively.

Decreases of revenue appear under Wharfage on Imports £12 12s. 11d., Wharfage on Exports £18 12s. 8d., Tonnage Dues £13 13s. 3d., *Ad Valorem* Duty £14 5s. 11d., and War Dues £79 6s. 5d.

The decrease under Wharfage on Exports was unexpected as, although a mill, closed in 1926, was re-opened in 1927, another mill exported 94 tons of fibre and 50 tons of tow less than in the previous year.

The decrease on War Dues is due to the fact that they were abolished in 1926 and therefore do not appear in 1927.

*Comparative Statement of Customs Revenue for the years  
1926 and 1927.*

	1926.			1927.			Increase.			Decrease.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Duty on Imports ...	2,304	4	0	2,375	8	11	71	4	11	—	—	—
Wharfage on Imports	1,502	11	7	1,489	18	8	—	—	—	12	12	11
Wharfage on Exports	479	1	6	460	8	10	—	—	—	18	12	8
Water ...	55	6	0	129	10	0	74	4	0	—	—	—
Permits ...	31	18	0	34	19	0	3	1	0	—	—	—
Warehouse Rent ...	23	1	0	24	14	0	1	13	0	—	—	—
Tonnage Dues ...	380	11	6	366	18	3	—	—	—	13	13	3
5% Duty ...	143	18	9	129	12	10	—	—	—	14	5	11
War Dues ...	79	6	5	—	—	—	—	—	—	79	6	5
<b>Totals ...</b>	<b>£4,999</b>	<b>18</b>	<b>9</b>	<b>£5,011</b>	<b>10</b>	<b>6</b>	<b>£150</b>	<b>2</b>	<b>11</b>	<b>£138</b>	<b>11</b>	<b>2</b>

**CUSTOMS EXPENDITURE.**

Customs expenditure amounted to £564 2s. 8d., as compared with £521 2s. 3d. in 1926.

The increase appears under Equipment. The growing demand and quicker delivery of water supplied to shipping necessitated the installation of a larger hose between the wharf hydrant and the water-boat.

In using the 2½-inch hose it took a little over 3½ hours to fill the water-boat; but, now that a 4-inch hose is fitted, the time is reduced to 2 hours.

### IMPORTS.

The value of imports for 1927 amounted to £49,678, as against £56,040 in 1926, showing a decrease of £6,362. This total includes Government imports, exclusive of munitions of war, to the amount of £1,827.

The principal increases in value over 1926 are in :—							£
Coal and coke	...	...	...	...	...	...	299
Rice	...	...	...	...	...	...	341
Spirits	...	...	...	...	...	...	162
Sugar	...	...	...	...	...	...	622
Timber	...	...	...	...	...	...	588

The principal decreases are :—

*Boats	...	...	...	...	...	...	800
Chemicals, Drugs, etc.	...	...	...	...	...	...	219
Drapery and Dry Goods	...	...	...	...	...	...	1,792
Earthenware and Glassware	...	...	...	...	...	...	273
Flour	...	...	...	...	...	...	269
Foodstuffs (other than enumerated)	...	...	...	...	...	...	1,273
Grain	...	...	...	...	...	...	616
Machinery	...	...	...	...	...	...	698
Margarine and Butter	...	...	...	...	...	...	388
Oilman' stores	...	...	...	...	...	...	627
Paraffin Oil	...	...	...	...	...	...	955
Stationery	...	...	...	...	...	...	124
Tea	...	...	...	...	...	...	369

\*A water-boat to the value of £800 was imported in 1926

Two large shipments of paraffin oil were imported in 1926, as against one in 1927.

### EXPORTS.

The value of exports in 1927 amounted to £34,274, as against £39,977 in 1926, showing a decrease of £5,703.

The principal increases were :—							£
Flax Seed	...	...	...	...	...	...	174
Wool	...	...	...	...	...	...	101
and decreases :—							
Fibre and Tow	...	...	...	...	...	...	3,877
Rope and Twine	...	...	...	...	...	...	1,295
Hides	...	...	...	...	...	...	183
Specie	...	...	...	...	...	...	609

The weight of fibre and tow exported during the year was 738 and 365 tons respectively, as compared with 751 and 417 tons respectively in 1926.

## WAGES AND COST OF LIVING.

Skilled and semi-skilled workmen ... ..	}	3s. 6d. to 6s. per day.
Carpenters, masons, smiths, &c. ... ..		
Labourers, agricultural ...		
Labourers, agricultural, female		
Labourers, general ... ..		2s. 6d. per day.
		1s. 6d. to 2s. per day.
		2s. 6d. per day.

Under certain circumstances, when performing work of a particularly arduous nature, e.g., coaling or discharging coal from ships, labourers are paid at a higher rate and earn from 3s. to 5s. per day.

Night work is paid for at the rate of 1s. per hour.

Domestics :—

Housemaids 10s. to 25s. per month, with board and lodging.

Cooks 20s. to 60s. per month, with board and lodging.

Male servants 30s. to 60s. per month, with board and lodging.

Grooms and gardeners 2s. 6d. per day.

The cost of the principal articles of consumption during the year under review was as follows :—

Meat 1s. per lb.

Fish cheap and good.

Eggs 2s. per dozen.

Butter, fresh 2s. 6d. per lb., tinned 3s. per lb.

Bread 5d. per 1½-lb. loaf.

Milk 4d. per bottle.

Tea 3s. per lb.

Coffee 2s. 6d. per lb. Local coffee 2s. per lb.

Sugar 3½d. per lb.

Rice 3½d. per lb.

Tobacco 11s. per lb.

Whisky 6s. 9d.-9s. 6d. per bottle.

Kerosene 15s. 6d. per case.

## IV.—Communications.

## SHIPPING.

The number of vessels calling at the port during the year was 39, as compared with 40 during 1926. The total tonnage entering and clearing the port was 143,131, as compared with 164,327 in 1926. The vessels calling were made up as follows :—

British warships ... ..	4
British merchant ships ... ..	34
German cruiser ... ..	1

Normal mail service, that is, one outward and one homeward mail each month, was maintained throughout the year.



**TELEGRAPHS.**

The Eastern Telegraph Company maintains a cable station in the Colony, where messages are accepted for all parts of the world. There is no internal postal service nor inland telegraph.

**TELEPHONES.**

The telephone system is maintained by private subscribers. The rates for telephone service are £5 per instrument per annum.

**ROADS.**

The maintenance of the roads under existing conditions is still a difficult proposition.

Expenditure on this service amounted to £900. The repeal of the Ordinance prohibiting motor traffic has been approved and the matter of a Motor Traffic Ordinance and of Regulations is now under consideration. Consideration is also being given to the introduction of road-making machinery, e.g., stone-crushers, rollers, &c.

**V.—Justice, Police, Prisons.****SUPREME COURT.**

There were no cases on the criminal side of the Supreme Court during the year under review. There was one civil action only. This was a matrimonial cause in which a decree *nisi* was granted.

**POLICE COURT.**

Ninety-six cases were heard in the Police Court, resulting in fifty-four convictions.

Comparative table of Police Court convictions for the past five years is appended :—

The increase in Police Court convictions partly arises from the enforcement of the Education Ordinance.

<i>Previous Years.</i>	<i>1923.</i>	<i>1924.</i>	<i>1925.</i>	<i>1926.</i>	<i>1927.</i>
Assaults and other offences against the person.	4	2	3	3	14
Malicious injury to property ...	3	2	2	2	2
Offences other than malicious against property.	3	1	2	2	3
Offences against Highways and other Laws tending to the social economy of the Island.	6	1	14	14	17
Educational ... ..	—	—	4	4	10
Others ... ..	2	6	9	9	8
<b>Total ...</b>	<b>18</b>	<b>12</b>	<b>34</b>	<b>34</b>	<b>54</b>

**GAOL.**

There were two prisoners in gaol at the end of 1926. The number of prisoners committed during the year was fifteen, of which total three were committed on remand.

The total cost of the gaol during the year was £139 4s. 1d., as compared with £114 10s. 4d. for the previous year.

## VI.—Public Works.

The Public Works Department carried out an extensive programme during the year. Major operations of the Department during the year were the building of servants' quarters and stables to complete the Olive Cottage property, the razing and re-erection of the Government Forester's cottage, the razing and re-erection of the Old Country School. This building, by arrangement with the Lord Bishop of St. Helena, has been rebuilt as a vicarage for St. Paul's Church, and a comfortable and substantial residence is now available for this purpose.

*Maintenance of Roads.*—See under Communications.

*Maintenance of Water.*—The increased demand for water for shipping has exercised the mind of Government to a considerable extent and arrangements were made during the latter part of the year for the provision of new tanks for the purpose.

The following extensive repairs to water-lines were carried out during the year :—

1. The replacement of the water-line and old ram which provides the public water-supply to Francis Plain.

2. The renewal of the old pipe-lines leading from Wills' land to the cattle-troughs in the Longwood area.

A considerable programme of minor repairs was also carried out.

## VII.—Public Health.

There was a widespread epidemic of influenza at the beginning of the year. There were upwards of 2,000 cases and the resources of the Medical Department were tried to the utmost. Happily there were few deaths attributable to this epidemic.

The number of admissions to hospital was 113. 6,066 out-patients were treated.

There were 124 children vaccinated during the year. This is more than double the number of vaccinations in 1926. This extraordinary increase is chiefly due to the fact that attention was particularly drawn to the Vaccination Ordinance and to the obligations of parents, &c., under the Ordinance.

A medical examination of all the school children was made during the year. This is the first time that such an examination has been made. A highly satisfactory state of general health was revealed, with the exception of the dental condition of the children. A dental surgeon was appointed during the latter part of the year and arrived in the Colony about the middle of December.

**VIII.—Vital Statistics.****POPULATION.**

The estimated civil population on 31st December was 3,754, as compared with 3,728 at 31st December, 1926. Deaths during the year numbered 63, as compared with 67 in the previous year. The death-rate for 1927 was 16.78 per 1,000, as compared with 17.97 for 1926.

There were 99 births during the year, the birth-rate being 26.55 per 1,000, as compared with 29.77 in 1926.

The percentage of illegitimate births for the year was 21.21.

There were 36 marriages during the year.

**INFANT MORTALITY.**

The infant mortality rate for the year was 3.99 per 1,000. For the years 1923 to 1927 infant mortality was 9, 11, 7, 14, 15.

The question of infant mortality has been occupying the attention of Government to a considerable extent, and the question of the establishment of Mothercraft and Infant Welfare centres is under consideration.

**SANITARY.**

The water-supply and drainage systems have proved adequate.

There have been no complaints regarding slaughter-houses and bakeries, and there have been no prosecutions under the Board of Health Ordinance.

**IX.—Education.**

The total number of children under instruction was 680.

The technical training class for boys mentioned in the 1925 and 1926 Reports was started during the year and the Superintendent of Education has reported on this class as follows :—

“ The woodwork class in the Boys' School is now well under way, and, considering the initial paucity of equipment, has already done good work. Instruction is given for two hours on each of two afternoons in the week. The boys are interested and keen and quick to learn, and the progress they have already made is gratifying and has amply justified the establishment of the class.”

The Superintendent of Education has rendered a satisfactory report as a result of his quarterly examinations.

**X.—Lands and Survey.**

There were five meetings of the Commissioners of Crown Property held during the year. Forty-one grants of land for building and flax-planting were sanctioned.

**XI.—Labour.**

See under Trade and Economics.

**XII.—Miscellaneous.****LEGISLATION.**

Five Ordinances were enacted in 1927, as follows :—

No. 1.—Consolidation of Customs Ordinances.

No. 2.—To provide for the registration in the Colony of Letters Patent granted in the United Kingdom.

No. 3.—Supplementary Expenditure of 1926.

No. 4.—To provide for Sessions of the Supreme Court to be held in Ascension Island.

No. 5.—An amendment of the Ascension Island Police Ordinance of 1923.

**CLIMATE.**

*Barometer.*—The mean barometric pressure for the year was 1014.825.

The mean temperature was 61.2.

The absolute maximum, reached on 28th February, was 73.0.

The absolute minimum, 52.0, was reached on 24th July.

The mean wind force for the year under review was 9.7 m.p.h. (3.9 Beaufort notation).

The wind direction for the year was as follows :—

								<i>Days.</i>
E. ...	...	...	...	...	...	...	...	6
E.N.E.	...	...	...	...	...	...	...	4
E.S.E.	...	...	...	...	...	...	...	12
S.S.E.	...	...	...	...	...	...	...	251
S.E.	...	...	...	...	...	...	...	43
S. ...	...	...	...	...	...	...	...	37
S.W.	...	...	...	...	...	...	...	6
Calm	...	...	...	...	...	...	...	2
No observations	...	...	...	...	...	...	...	4

**RAINFALL.**

The total rainfall for the year was 27.928 inches. The greatest fall was on the 1st May, 1.120 inches.

These records are taken at Hutt's Gate Observatory, height 2,045 feet.

In Jamestown, about sea-level, the rainfall was 6.006 inches, and number of rain-days 59. Average per rain-day .017 inch. The greatest fall was .075 inch on the 16th April.

At Plantation, 1,600 feet, the rainfall was 31.60 inches, the greatest fall being 1.59 inches on 1st May, and the number of rain-days 180.

At the Briars Station, height 900 feet, the total for the year was 18.58 inches.

### POST OFFICE.

The total number of letter-bags received at the Post Office from the United Kingdom and Ascension was 228, as compared with 221 in 1926; while there were 230 parcels post receptacles received, as compared with 226 in 1926.

21,862 letters and other packages were forwarded from the Post Office, as compared with 22,540 in 1926.

### SAVINGS BANK.

The total number of depositors into the Savings Bank in 1927 was 246, as compared with 243 in 1926. Total deposits amounted to £4,048, as compared with £2,412 in 1926. This very considerable increase is due to increased internal prosperity and to the fact that some overseas visitors made use of the Savings Bank.

Stock to the value of £12,082 (cost price) is held by Government on behalf of Savings Bank depositors.

### POOR BOARD.

Details of revenue and expenditure of the Poor Board are not yet available as the Board's financial year does not end until 31st March.

### PUBLIC MARKET.

Revenue from the Public Market during 1927 amounted to £34, while expenditure totalled £23 13s. 2d. This compares with 1926 as £30 17s. 2d. and £21 12s. 6d. respectively. The finance and control of the Public Market are in the hands of the Poor Board.

### WEIGHTS AND MEASURES.

The Inspector of Weights and Measures reports that all weights and measures are accurate. During the year under review, four weighing-machines have been adjusted, one weighing-machine was condemned, 10 weights were readjusted, and 7 weights condemned.

### BOY SCOUTS.

There is one troop of Boy Scouts on the Island, consisting of 6 patrols of 8 boys each and a small pack of 6 wolf cubs. These patrols are divided into two sections each under an Assistant Scoutmaster, while a Scoutmaster is in command of the whole troop.

### CHURCH LADS' BRIGADE.

There are two Companies of the Church Lads' Brigade, one at St. Paul's and one at St. Matthew's. St. Paul's Company consists of 3 officers, 11 non-commissioned officers, 42 cadets, and 43 boys in the Training Corps, while St. Matthew's Company consists of 26 lads under 3 officers.

## GIRL GUIDES.

There are two Companies of Girl Guides, one in Jamestown (1st Jamestown Company) and one at St. Paul's (1st St. Paul's Company).

In the Jamestown Company there are 40 guides and 24 Brownies, while the Country Company consists of 3 officers, 24 rangers, 36 guides, and 7 Brownies.

## ASCENSION ISLAND.

## STATISTICS.

*Population.*—The population of Ascension Island on 31st December, 1927, was 298, made up of 111 Europeans and 187 St. Helenians.

*Shipping.*—29 ships entered and cleared the port during the year, as compared with 34 in 1926.

*Hospital.*—In-patients 22. Out-patients (including 19 dental) 243.

*Rainfall.*—The rainfall for Green Mountain was 39.83 inches and at Georgetown 5.73 inches. 1927 was, therefore, considerably drier than 1926 when the rainfall for Green Mountain was 42.68 inches and for Georgetown 10.1 inches.

*Temperature.*—The temperature taken at 21 hours at 38 feet above sea-level was mean maximum 83.7°, minimum 73.2°.

## GENERAL OBSERVATIONS.

The farm at Green Mountain carries the following stock :—

Sheep	...	...	...	...	...	...	439
Pigs	...	...	...	...	...	...	44
Cattle	...	...	...	...	...	...	26
Mules	...	...	...	...	...	...	5
Donkeys	...	...	...	...	...	...	7
Horse	...	...	...	...	...	...	1

*Water-Supply.*—The rainfall was spread fairly evenly over the year except for the months of May and June which were very dry. September and November were the wettest months with 5 inches and 5.72 inches respectively.

*Turtles.*—113 turtles were captured in 1927, as compared with 45 in 1926.

H. J. PINK,  
*Officer-in-Charge, Secretariat.*

SECRETARIAT,  
17th March, 1928.

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(Dependency of Jamaica)

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## (Dependency of Jamaica.)

**REPORT FOR THE YEAR ENDED 31st DECEMBER, 1927.**

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### Geographical.

The Cayman Islands consist of three small islands in the Caribbean Sea, lying north-west of Jamaica and approximately mid-way between that island and the south-west coast of Cuba. Sixty miles intervene between Grand Cayman and Little Cayman, and ten miles east of the latter is Cayman Brac. The Group lies between  $79.83^{\circ}$  and  $81.30^{\circ}$  West longitude and the 19th and 20th parallels of North latitude. Grand Cayman, the largest of the islands, is 17 miles in length from east to west, four miles in width at the east and seven at the west. No part of the island is more than fifty feet above the surrounding ocean. Cayman Brac is eleven miles long by one and a quarter at its widest. Traversing its length from east to west is a central ridge of rock with precipitous sides, 150 feet high at the eastern end and sloping to the general level a few feet above the sea at the western end. Water-worn caverns are noticed along the entire length of this ridge, locally called the bluff, indicating that the low land around the base, much the smaller part of the island's area, has been more recently, in a geological sense, elevated above the sea. Little Cayman, the smallest of the group, is flat, and largely a sand ridge

above the surrounding ocean. There are no outlying cays or reefs. The hundred fathoms ocean depth closely encircles the islands. A basin in the ocean floor, known as Bartlett's Deep and said to be one of the deepest areas in the Caribbean, lies parallel with the south of the islands from twenty-five to fifty miles off shore.

### **Historical.**

The islands were discovered by Columbus on the 10th May, 1503, but were not occupied by the Spaniards. They were first called Las Tortugas, on account of the number of turtle in the surrounding waters. The present name is supposed to be derived from "cayman"—alligator—this reptile being at one time numerous in the smallest island. Settlement flowed from Jamaica in the first half of the 18th century; but many of the present inhabitants bear the surnames of British seamen, wrecked either on the islands or on the neighbouring coast of Cuba, who have remained domiciled in the Dependency.

### **Constitution.**

In the early days of settlement public affairs were managed by the Justices of the Peace appointed by the Governor of Jamaica acting with and under the direction of a locally-elected "governor." To this body elected Vestrymen were subsequently added, and in 1833 a *Custos* was commissioned. In 1863 an Act was passed by the Imperial Parliament (26 and 27 Victoria, chapter 31) recognising the existence of acts and resolutions passed by the local body and validating such as should be subsequently assented to by the Governor of Jamaica. Under this authority the Justices and Vestry therein mentioned revised the local enactments, and twenty acts passed at various times between the 2nd January, 1832, and the 1st July, 1864, were submitted to Governor Eyre of Jamaica and signed by him in assent on the 24th March, 1865. As provided in the Imperial Act, the Legislature of Jamaica may make laws for the peace, order, and good government of the Dependency and may amend or repeal any of the laws locally passed. Under the provisions of Jamaica Law 24 of 1898, as amended by Law 33 of 1920, the Governor of Jamaica has power to appoint a Commissioner to administer the affairs of the Dependency. The Commissioner performs the duties of Collector-General and Treasurer and presides in the Grand Court where, when sitting alone, he has the powers of three Justices of the Peace.

## **I.—GENERAL OBSERVATIONS.**

### **Passenger Service.**

The only circumstance of local moment in the year under review was the realization of a long desired public utility in the establishment of a regular mail and passenger service with Jamaica. Communication with the outside world has been by small sailing vessels

without accommodation. The building of a motor-vessel by a local company under contract with the two Governments and the initiation of a regular service are marks of progress.

### **Emigration and Immigration.**

While seamen from the islands are admitted into the United States for the purpose of shipping on foreign voyages, and visitors are admitted for short periods, the restriction on immigration into the United States is now bearing adversely on natives of these islands. In early 1927 a quota number of 20 persons was allocated to the Cayman Islands, but in the last month this concession was withdrawn and all applicants from the Dependency were placed on the already over-filled Jamaica list. A number of labourers, clerks, etc., emigrated to the eastern coast of Nicaragua where a large area of virgin land is being cleared and planted in bananas. The conditions of life are, however, reported as unfavourable and many have returned. There is no immigration.

### **Legislation.**

Seven laws were enacted in 1927, two being financial, three revenueal, and two social, the last named bringing legislation with respect to the slander of women and the suppression of obscene publications in line with other parts of the Empire.

## **II.—FINANCE.**

The revenue and expenditure in 1927 are shown below in comparison with the previous five years, and the average :—

<i>Year.</i>					<i>Revenue.</i>	<i>Expenditure.</i>
					£	£
1922	...	...	...	...	6,996	7,565
1923	...	...	...	...	6,611	6,823
1924	...	...	...	...	6,005	7,013
1925	...	...	...	...	6,970	6,622
1926	...	...	...	...	7,320	7,437
Average for five years	...	...	...	...	6,780	7,092
1927	...	...	...	...	6,148	7,651

Customs (£4,381) and Post Office (£1,005) together contributed 87.6 per cent. of the total revenue. Sales of stamps to collectors amounted to £465.

The expenditure may be summarised as follows : Departments, £3,305 ; Public Works, £1,853 ; Education, £1,500 ; and other services, £993. Unexpected charges and the erection of a Government warehouse caused an excess of expenditure (£1,500) over revenue, and at the end of the year the Balance of Assets stood at £1,922. There is no public debt.

## III.—PRODUCTION.

The total exports amounted to £13,358, of which all but £64 in value were of domestic produce, and compare favourably with the average for previous five years, £11,405.

The exports are mainly the products of the turtle fishery and of palm-straw rope, a spare-time industry of women and children.

<i>Articles.</i>	<i>1923.</i>	<i>1924.</i>	<i>1925.</i>	<i>1926.</i>	<i>1927.</i>
	£	£	£	£	£
Honey ... ..	26	98	63	98	140
Turtle, live ... ..	2,470	3,750	6,000	5,000	5,400
Turtle skin ... ..	526	350	840	206	437
Turtle Shell ... ..	2,728	4,749	5,533	4,160	5,132
Rope, straw ... ..	1,409	640	1,754	1,710	1,972
Unenumerated ... ..	586	249	165	270	277
<b>Totals ...</b>	<b>£7,745</b>	<b>£9,836</b>	<b>£14,355</b>	<b>£11,444</b>	<b>£13,358</b>

The catch of green turtle, returned as of merchantable size, was larger than in 1926. The hawksbill fishers were also more successful than in 1925, the catch weighing 4,830 lb. at an average value of £1 1s. 3d. per lb., as compared with 3,145 lb. and a higher rate of £1 6s. 5d. in the previous year.

The export of thatch-palm rope increased from £1,710 in 1926 to £1,972 in the year under review. This small industry provides an aid to livelihood to many who, being without a vigorous breadwinner, would otherwise be unable to maintain themselves.

The building of small wooden sailing vessels which are registered locally but frequently pass to other British ownership, or to foreigners, is an asset not capable of accurate estimate.

The several items in the turtle fishery and making of rope were all more profitable than in the previous year.

The destination of exports is shown in the following tabulation. The turtle shell sold in Jamaica is, however, passed to the London market.

<i>Exports to:</i>	<i>Food, drink, etc.</i>	<i>Raw materials.</i>	<i>Manufactured articles.</i>	<i>Miscellaneous.</i>	<i>Total.</i>
	£	£	£	£	£
United Kingdom ... ..	—	312	—	—	312
Jamaica ... ..	150	5,211	1,968	43	7,372
United States ... ..	5,450	200	—	12	5,662
Other Countries ... ..	8	—	4	—	12
<b>Totals ...</b>	<b>£5,608</b>	<b>£5,723</b>	<b>£1,972</b>	<b>£55</b>	<b>£13,358</b>



## IV.—TRADE AND ECONOMICS.

The imports reached a total of £40,964, or £255 less than the average normal imports for the previous five years. The values of spirits imported and re-exported in 1923 and 1924 are not included in these figures. This trade has entirely ceased.

The countries of origin are so far as possible shown in the following tabulation, but it must be borne in mind that many articles imported from Jamaica are the products or manufactures of the United Kingdom and other countries.

<i>Imports from:</i>	<i>Food, drink, etc.</i>	<i>Raw materials.</i>	<i>Manufactured articles.</i>	<i>Miscellaneous.</i>	<i>Total.</i>
	£	£	£	£	£
United Kingdom	174	—	1,691	220	2,085
Canada ...	292	—	—	—	292
Jamaica ...	10,806	198	2,406	364	13,774
United States ...	7,098	1,963	10,101	983	20,145
Other Countries	588	41	1,252	155	2,036
Parcels Post ...	—	—	—	2,632	2,632
<b>Totals ...</b>	<b>£18,958</b>	<b>£2,202</b>	<b>£15,450</b>	<b>£4,354</b>	<b>£40,964</b>

The excess of imports over exports is balanced by the remitted wages of seamen in every part of the world, the earnings of island vessels not in the turtle fishery, and the contributions to dependents here of men working ashore in the United States and in the ports of Central America.

Four cattle dips were in operation during the year and material benefits in reduction of tick pest have accrued from their use.

## BANKING FACILITIES.

There are no branches of banks in the Dependency. Remittances are made from abroad by drafts on American banks, of branches of banks established in Jamaica, which are accepted by any of the shops and used by them in the purchase of stocks of goods. The Post Office money order system is used to some extent, orders paid in the Dependency in 1927 amounting to £4,828, while the orders issued for payment abroad was more, i.e., £5,233.

The depositors in the Government Savings Bank number 46; the deposits for the year have been £686; the withdrawals have amounted to £575; and the balance due depositors stands at £1,250. Investments made some years ago, with the Crown Agents as trustees, total £1,000.

## V.—COMMUNICATIONS.

In the past all intercourse with the neighbouring islands, the coasts of Central America, and the southern ports of the United States has been by trading schooners, some of which have motor

auxiliary. In the year under review, however, a long desired mail, passenger, and freight service, by motor-vessel specially built, was established with Jamaica; 15 voyages per annum, with three voyages to a gulf port in the United States.

#### POSTAL AND TELEPHONE SERVICES.

Foreign mails are received through Jamaica and the Isle of Pines, Cuba; and all outgoing vessels, to whatever port directed, are the bearers of mails. Tri-weekly mail services are maintained between the settlements on each island, but inter-communication is infrequent. Boddentown, Georgetown, and West Bay, with three intermediate stations, are connected by telephone. A telephone, privately owned, extends the length of Cayman Brac and messages are sent and delivered for a nominal fee. The Dependency has no cable or wireless communication with the outside world.

#### SHIPPING.

Georgetown is a port of registry having on its register 49 small sailing and 10 motor vessels, with a total tonnage of 3,234 tons. Three vessels with a total tonnage of 63 tons were built and registered in 1927.

One small steamship (241 tons) called at the islands in 1927. The following table shows the number and tonnage of the sailing vessels entered and cleared.

Nationality.	No. entered.	Tons.	No. cleared.	Tons.
British... ..	177	13,247	179	12,504
American ... ..	11	2,543	10	2,543
Honduranean ... ..	2	57	3	82
Nicaraguan ... ..	3	135	3	135
Panamanian ... ..	1	48	2	82
<b>Totals</b> ... ..	<b>194</b>	<b>16,030</b>	<b>197</b>	<b>15,346</b>

#### VI.—JUSTICE, POLICE, AND PRISONS.

There is no serious crime. In the year under review but one case, wounding, came before the Higher Court, and three persons were committed to prison, for safe custody.

One hundred and six cases came before Petty Sessions, being offences of a minor nature such as disorderly conduct, non-payment of taxes, or breach of regulations with respect to vehicles. The Police Force consists of an Inspector and six constables, but the duties of the latter are largely in connection with the transfer and delivery of country mails.

## VII.—PUBLIC WORKS.

Under this head there may be mentioned the erection, on the water-front at Georgetown, of a Government warehouse through which, in future, all goods for the port, or in transit, must pass.

## VIII.—PUBLIC HEALTH.

The health of the Dependency is good. There were 162 births (31 per *mille*) and 57 deaths (11 per *mille*). Of the latter, eleven were over 80 years of age, twenty-four between 60 and 80, and eight under 5 years of age. Six cases of pulmonary tuberculosis came under observation, three being imported. There were four deaths from the disease. Twelve cases of typhoid fever were reported, but no deaths. In the previous ten years there has been an occasional case of malaria fever, generally identified as imported, and the apparent absence of anophelene mosquitoes would make the incidence regarded as negligible. In the past year, however, there has been a larger influx of returned islanders from the Central American coastal towns, many with malarial infection, and there have been cases of malaria fever amongst permanent local residents.

## POPULATION.

The population at the census of 1921 was enumerated at 5,253. The numbers at the end of 1927 are estimated at 2,090 whites and 3,560 coloured, a total of 5,650.

## METEOROLOGICAL.

Observations are taken in Georgetown only. The rainfall amounted to 42.39 inches, the lowest for many years, and 25 inches below the average for the previous five years. The heaviest precipitation was in October (13.19 inches) and the largest single day's rain was on the 16th of that month (6 inches). With a smaller rainfall the mosquito plague was sensibly ameliorated in the summer months. The lack of moisture, however, adversely affected the crops of ground provision, such as yams, sweet potatoes, and Indian corn, which were less productive than usual. The air temperature ranges from 70 to 80 in the months October to March, and ten degrees higher in summer. No cyclonic disturbances passed over the islands in 1927.

## IX.—EDUCATION.

Nine Government primary schools were in operation throughout the year. These, with ten private schools, had 1,025 pupils enrolled and an average daily attendance of 805. The total expenditure in the Government schools was £1.289. Fifty candidates sat to the annual pupil teacher examination set by the Jamaica Education Department; eighteen were successful.

## X.—LANDS AND SURVEY.

There has been no survey of the Dependency. The first settlers (circa 1740) were given conditional patents of a thousand acres, but all record of the localities has been lost. All land is now held by right of occupancy and without grant of the Crown. The only areas recognised as remaining public are inaccessible or barren and valueless.

## XI.—LABOUR.

There is no immigrant labour and no local industry to attract it. Labour is entirely emigrant; as seamen to the Gulf ports of the United States seeking employment in deep-sea voyages; as woodcutters and farm-hands in Honduras and Nicaragua; and, to a very small extent, as clerks or miners in the latter Republic.

H. H. HUTCHINGS,  
*Commissioner.*

GRAND CAYMAN.

24th March, 1928.

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# COLONIAL REPORTS—ANNUAL

No. 1383.

## REPORT OF THE Colonial Survey Committee 1927

*(For Report for 1925 see No. 1286 (Price 1s. 0d.), and for  
Report for 1926 see No. 1325 (Price 1s. 3d.))*



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1928

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## COLONIAL SURVEY COMMITTEE REPORT, 1927.

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*The Report covers for most of the territories considered the two years 1925 and 1926 or 1925-26 and 1926-27. In the case of each territory the period reviewed depends on whether the departmental year there ends on the 31st December or the 31st March.*

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The following Report of the Colonial Survey Committee has been submitted to and approved by the Secretary of State for the Colonies.

W. C. BOTTOMLEY,  
*Chairman.*

H. P. DOUGLAS,  
*Rear-Admiral and  
Hydrographer of the Navy.*

E. M. JACK,  
*Colonel Commandant,  
and D.G.O.S.*

H. St. WINTERBOTHAM,  
*Colonel, General Staff, War Office.*

G. T. McCaw, }  
E. B. Bowyer, } *Secretaries.*

May, 1928.

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## **AIR PHOTOGRAPHS FOR RECONNAISSANCE OR MAPPING.**

### **The Colonial Office Conference, 1927.**

1. The Colonial Office Conference of 1927 showed a general desire on the part of Colonial Authorities to obtain information as to the use and cost of air-photo surveys. Generally speaking there is little reliable printed information to be obtained. Such books as are available are, for the most part, written to explain and to advertise this or that machine or method. Official reports are reliable, but often fail to give a true economic picture. Generally, too, such reports deal with applications, scales, and orders of accuracy, desirable under special rather than average circumstances.

The general trend of questions at the Conference may be summed up as :—

- I. What help in development can be got from air photography and air reconnaissance?
- II. How much will that help cost in its various applications?

### **Photography and Reconnaissance.**

2. *Responsibility.*—There are several processes in every air-photo survey. The flying and photography are the province of airmen; the control, surveys, fairdrawing and reproduction that of surveyors. The reconnaissance, if a technical judgment “at sight” is required, must be done by the responsible expert in forestry, soils, railway or road location, etc. The Colonial Survey Committee is in a position to answer questions on these points, referring, if necessary, to the Air Survey Committee, whose reports and professional papers form the best contemporary guide to possibilities, methods and processes.

3. *Characteristics of an Air Photo.*—Before discussing the questions raised it will be well to describe the characteristics of an air photograph.

(a) *Size and Scale.*—Cameras used in the air are made for sizes of plate or film varying from 7 × 7 inches to 4 × 5 inches. The scale at which they are taken depends on the height of flight and the focal length of the camera (or distance from plate to lens). The smallest scale normally taken may be considered as 1/40,000 (roughly 1½ inches to the mile). Generally the scale is larger, averaging perhaps 1/20,000 (or 3 inches to the mile). At 1/40,000, roads, houses, streams, etc., are so small as to be hardly distinguishable. For very accurate surveys photographs must be taken on glass plates, for less accurate work and generally in all matters of reconnaissance on film. Whether on glass or film the original can be enlarged say 3 times and yet be used for good mapping. It would often be useful to photograph at a much smaller scale (say 1/80,000) and enlarge. Unfortunately that is not possible. The necessary altitude would

be too great, and the focal length necessary to cover the plate without distortion, too long. Every photograph taken may be considered to have on it about 4 square miles on the average, and as "overlap" is necessary, i.e., as each plate has to cover a portion of all the surrounding plates, we can take one photograph to each square mile of map or reconnaissance.

(b) *Tilt and Relative Heights*.—If the ground is as flat as Essex or Flanders, the photograph may be considered as a perspective view foreshortened in accordance with the angle at which the camera axis is tilted with regard to the plumbline, or at which the photograph is tilted with regard to a horizontal plane. It is extremely important that photographs should be taken as nearly as possible parallel to the ground, i.e., without tilt. It is not possible to correct tilt afterwards without expensive work on the ground. Experience proves that with proper training pilots can fly within one or two degrees of the horizontal. If the ground is not flat, then the rays from the camera to objects not immediately underneath do not pass through the proper positions in plan, but show the summits, or top points, further away from the point vertically below the camera than they actually are in nature. It must be remembered that the photograph is a representation in two dimensions of the three dimensions of nature. Every photo is then characterized by two undesirable features—a foreshortening due to tilt (which cannot be wholly avoided) and a distortion due to relative height which is worst near the edges. But it is from this actual height distortion that contours are surveyed. In order to complete the contour survey, and to correct the plan, each part of the area must appear not only on one but on two photographs taken from different points in the air. These two views of the same portion, or area, may then be put in a stereoscope and will give a relief (or plastic) image of the ground.

(c) *Effect of (a) and (b) on Specifications for Photography*.—The above summary will show that in ordering air photographs two important points to specify are :—

1. The photographs must in no case show tilts of over 3 degrees and the average tilt must not exceed 1 degree.
2. Photographs must have at least 60 per cent. overlap in the line of flight and 15 per cent. laterally.

The cost of such photography depends on a number of factors of which landing grounds, aerodromes, transport of petrol and oil, and the size of the contract are the most important. A low price would be £3 a square mile.

(d) *Effect of Atmospheric Conditions*.—A photograph will vary considerably in value according to atmospheric conditions. It cannot be taken until some hours after dawn, or after some early

our in the afternoon, depending on the strength of the light. Even in the best of climates, days for photography have to be picked. In England there may be a good day once a fortnight, in a Canadian summer twice a week, etc. The quality and sharpness of each photograph depends primarily on the "light value".

(e) *Value of the Single Photograph*.—Once taken, the photograph records with extraordinary effect every detail to be seen. The effect of seeing a large area at once, directly from above, makes it possible to identify characteristics in a way impossible from any point of observation on the earth. Thus the prevalence of a certain type of tree, the general character of the soil, the presence of marsh, rocky outcrop, cultivation (and often the particular sort of cultivation), tracks both in use or even long abandoned, new or old earthworks such as old irrigation channels, are all matters which have been studied from air photographs.

(f) *Use of the Stereoscope*.—The photographs having been examined singly, a subsequent examination of overlapping pairs in the stereoscope will show the drainage system, hill and valley, relative steepness of slope, the strike, the most likely path for road or railway, relative easiness of defiles, and will help to determine correctly the purpose or character of artificial or natural detail.

(g) *The Photograph as a Record*.—The photograph remains a definite record of all natural features at the date of exposure. It may be used at any future time for further (perhaps larger scale) mapping. The photograph cannot, of course, record what it cannot see. Areas of really dense forest, as in Johore and perhaps in Brazil, form an impenetrable screen. If the trees are not in leaf, or if they are sufficiently spaced out, the stereoscope will penetrate them, even if, used singly, the photographs show little.

(h) *Photographs of Under-Water Objects*.—In photographing land under different conditions of atmosphere and light considerable experience has now been gained. There is, so far, little known about photographing objects under water. Experiments are now in contemplation. We know that, if the light is good and the water calm and clear of sediment, much can be seen. Mud-banks, shallows and rocks have been found. We have not yet tried what effect the stereoscope will have, nor has any real consecutive research been directed to this subject.

4. *Mosaics*.—The next stage is the mosaic, a word usually employed for a patchwork of uncontrolled air photographs. A mosaic is often very useful in flat country, and, if well made, may be traced and reproduced as a rough preliminary map. For the reasons given above, a mosaic is never precise in detail. It is common to tender for "rectified mosaics". The term is neither

correct nor self-explanatory. It is intended to describe a mosaic in which, either singly or in strips, the mosaic has been made to agree in scale with the position of control points. In England such "rectified mosaics" are made on the control of Ordnance Survey maps. In unmapped areas the control is generally one of scattered control points, either of the local triangulation, or of astronomically fixed positions. The latter form of control is quite suitable for the purpose of preliminary mapping. The normal class of error of astronomical fixing may be taken as 150 yards (in any direction), and if the points are widely spaced (say, 10 miles apart) they will form an adequate control in position and orientation for the mosaic. Commonly, however, mosaics are made by the fit of detail between successive prints. This principle is wrong in theory and leads to a loss of direction in individual strips. The natural consequence is that the detail, in the intervals between strips, is distorted and may have to be enlarged or reduced in comparison with the correct scale. It should be stated, then, that mosaics should be made from photographs with sufficient overlap to allow of the use of the methods given in professional paper No. 3 of the Air Survey Committee.

5. *Addition of Form Lines with the Stereoscope.*—Useful as a mosaic may be, it can show no heights. Rough form lines can be added, however, from the stereoscopic examination of overlapping pairs. Extra untrimmed photographs should be secured with the mosaic in order to make this examination possible.

### Air Photo Survey.

6. *Canadian Oblique Method.*—So far no actual survey methods of plotting or mapping have been mentioned. These methods naturally vary considerably in precision and cost. The cheapest method generally employed is one used in Canada for making quarter-inch maps of the river and forest country in Northern Ontario and Quebec. This method is purely perspective and assumes that the area to be mapped is quite flat. The photograph is taken at a considerable tilt so as to include the horizon and thereby to help to "control" the result. In reality the method boils down to copying, in a grid of squares, the details of the photograph over which a glass perspective of that grid of squares is laid. The one difficulty is in designing and drawing the perspective glass grid. Originally due to Doctor Deville of Canada, this method is admissible, provided that:—

- (a) The ground is flat and no contours are required;
- (b) The visibility is very good;
- (c) The detail to be mapped is sharp and clear (like the water edges of the Canadian lake country);
- (d) The final scale is small.



This method requires very little control (say, one point every 20 or 30 miles) and should not cost more than 10s. a square mile extra to the cost of photography. It has recently been used in Northern Rhodesia, but it is not known what success has been achieved. It is possible that the Sudd region of the Sudan might be mapped in this way, but the method will not find a general sphere of usefulness because of the large distortions which heights are bound to introduce at so large a tilt. Details may be studied in the following publications:—

(a) Report of the Canadian Air Board for 1923.

(b) Graphical Plotting from Air Photographs (H.M. Stationery Office).

7. *Arundel Method*.—A useful topographical method, now generally known as the Arundel method, is described in professional paper No. 3 of the Air Survey Committee. The only instrument required is the topographical stereoscope. Good and well-contoured maps have already been made in this way. A control of one point every 10 miles is required to start with, and perhaps additional points may be required subsequently. A fairly dense control of heights is wanted, however, if the contours are to be good. This control of heights need not necessitate any more bulky instrument than one field and one office set, or "battery" (say, three in number), of aneroid barometers. Generally speaking, the original plotting will be at the scale of the photographs themselves, and there is then material at once for a map at any medium scale between 2 and 6 inches to the mile. In an experimental survey in England on these lines the cost of field work *plus* plotting worked out at about 15s. per mile, additional to the cost of air photography. In most cases costs will be found to exceed this total. The party engaged were all highly skilled and worked harder and for longer hours than could be normal. Theoretically this method is admissible only in country in which altitudes (above the general level, not above mean sea-level) are not more than 1/10th of the height of flight. The result should give contours correct to within 15 feet and the plan should be sensibly correct. Further experiments are being undertaken with a view to seeing whether this method can be modified for use in more hilly country. There is no doubt that we have here a very good way of making topographical maps. It must be understood, however, that all who take part—from pilot to draughtsman—must be highly trained. Courses of about a fortnight in duration are sufficient to introduce skilled surveyors and draughtsmen to the theory and method, but practice is essential before a really reliable map can be made. Experienced surveyors agree that the contours so surveyed are, on the whole, an excellent guide to local feature and compare well with those made on the plane table. The sample map in the Air Survey Committee's report is not typical of the possibilities, as the original photographs were

ill-defined. The style of map just described is not perhaps precise in the strict sense of the word. It will not suffice for the final survey of a railway when the ultimate choice of route has been made, nor will it contour sufficiently closely for some economical purposes.

8. *Precise Methods*.—More precise surveys can be made from air photographs, but at a greater cost. To start with, the Arundel method will give sensibly accurate planimetry at any scale, and, when the final plan has been made, it can be contoured on the ground. A mixture of survey on these lines has just been applied to mapping in the Essen district in Germany. There are, in addition, various firms in France, Germany, Italy, and the United States which specialise in machines, or in work done by machines, for complete, and more or less precise, plotting. Some of these machines do reliable work, although it is doubtful whether contouring usually attains the accuracy claimed by advertisement. The drawback in all cases is the amount of control required. They all rest upon "placing" each photograph on a control of four points (say, one per sq. mile). Now a control of such density is bound to be costly and to take time. A method of Air Survey should be designed to work with the ordinary open control given by a second order triangulation (say, 10-mile sides). There are two main principles at the bottom of this statement. The first is economy, the second the theoretical advantage of a longer ground base. One photograph covers but a small area, and the camera in the aeroplane is a long way above it. The control is thus a weak one. Fortunately there is hope that a machine designed recently by Mr. Fourcade, and being built in England, will be capable of precise plotting from an open control. It would be wise in the meantime to await the result of research on this new model before embarking upon large-scale precise air surveys.

To recapitulate then :—

## 9. *Ground and Air Costs.*

### (a) **Air Costs.**

Air photography may cost from £3 upwards per sq. mile, although always substantially above that figure in small contracts or far from aerodromes and bases.

A good mosaic and additional pairs of overlapping prints will add from 5s. a sq. mile.

A plotted small-scale map on the Canadian principle, including control, will add from 10s. a sq. mile.

A plotted 3-inch Survey, Arundel method, will add from £1 upwards per sq. mile.

Compare the above with the following recorded ground costs :—

(b) **Ground Costs.**

<i>Scale.</i>	<i>Country.</i>	<i>Type.</i>	<i>Cost of Plane- tabling, per square mile.</i>	<i>Cost of Control per square mile.</i>
(a) $\frac{1}{2}$ inch ...	South Africa.	Very easy.	5s. 6d.*	2s. 4½d.*
(b) 1 inch ...	India.	Easy.	10s.	} 3s.
" " ...	"	Average.	15s.	
" " ...	"	Difficult.	35s. to 50s.	
(a) 1 inch ...	East Africa.	Very easy.	6s. 6d.*	8s. 6d.*
(b) 1 inch ...	India.	Easy.	15s.	} 12s.
" " ...	"	Average.	25s.	
" " ...	"	Difficult.	40s. to 100s.	
" 2 inch ...	India.	Intricate, open hills in the area of dense forest.	80s.	No data.
" 3 inch ...	Burma.	Forest reserves.	£4 to £25.	No data.
(a) 3 inch ...	Malaya.	Very difficult.	£47 to £50.	Included in previous figure.

*Notes.*—(a) Colonial Survey Sections—British Military personnel.

(b) Survey of India—taken from Records, 1921-22—Indian Planetablers.

\* Pre-war. Add 70 per cent. to bring to modern conditions.

10. *Remarks on Costs.*—It is not wise, however, to judge from the figures given above for ground surveys unless a party of really skilled topographical surveyors is available. Normally the civil surveyor does not start with experience in drawing and is too unskilled on the planetable to be economical as a topographer, but that does not imply that a small scale (say, one-inch) map, made by normal graphic planetabing, will not be cheaper than air-photo surveying. The first map, for administration and for development, should be made, in easy country, on the planetable, but it will generally be wise to secure military parties or to train native planetablers as is now being done in many places. Planetabing is a real craft, and requires skilled fingers and an instinctive or trained eye for country, but it does not require the services of a highly-educated man.

On the other hand, air-photo surveying will compete, economically, at its best scales (three to six inches) with any other form of surveying and is vastly quicker. In addition, the air photo is peculiarly suitable in surveys of:—

1. Townships (especially large towns with narrow streets);
2. Waterways, marshes, irrigation channels, estuaries, deltas, and coastlines;

or, in fact, any area difficult to penetrate or to see clearly from the ground. For cadastral surveys the photograph has the additional advantage of making collusion practically impossible.

11. *Railway Reconnaissance and Surveys*.—At the 1927 Conference particular interest was shown in the question of road and railway reconnaissance. Actual reconnaissance from the air will help in the first instance. A study of overlapping pairs in the stereoscope will aid in the selection of one or two alternatives and in the rejection of unsuitable routes, whilst a survey on the Arundel method, quickly completed, will save any ground survey except in the case of the final choice.

12. *Literature*.—The following books are recommended :—

1. Report of the Air Survey Committee for 1923. (His Majesty's Stationery Office, price 4s. 6d.)

2. Professional Paper No. 1 : Graphical Methods of Plotting from Air Photographs. (His Majesty's Stationery Office, 3s. (3s. 2d.).)

3. Professional Paper No. 2 : Flying for Air Survey Photography. His Majesty's Stationery Office, 2s. (2s. 1½d.).)

4. Professional Paper No. 3 : Simple Methods of Surveying from Air Photographs. (His Majesty's Stationery Office, 3s. 6d. (3s. 8½d.).)

5. Professional Paper No. 4 : The Stereoscopic Examination of Air Photographs. (His Majesty's Stationery Office, 3s. 6d. (3s. 8½d.).)

(All prices are net and those in parenthesis include postage.)

In addition to the above, there are available on demand reports and articles on *all aspects* of air photo surveying.

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## COLONIAL SURVEY REPORTS.

### British Honduras, 1925-26.

Governor.—Major J. A. Burdon, C.M.G.

Surveyor-General.—Mr. F. W. Brunton.

*Staff.*—This is made up of 3 Surveyors; 3 Draughtsmen; 4 clerks; 1 temporary Inspector of Crown Licences; 2 messengers. An appointment of Assistant Surveyor remains vacant.

#### *Expenditure (1) and Revenue (2).—*

				\$
(1) Personal Emoluments	...	...	...	17,552
Other charges :—				\$
Travelling	...	...	...	2,280
Surveys	...	...	...	5,330
Instruments, Stores, etc.	...			560
Rent Collection	...	...		298
Boundary Demarcation	...			300
Trigonometrical Survey	...			115
				8,883
				<hr/>
Total	...			\$26,435
				<hr/>
				\$
(2) Royalties from Mahogany	...			24,109
Royalties from Sapodilla Gum	...			1,050
Royalties from Cedar and Rosewood	...			43
				\$
				25,202
				<hr/>
Rent of Crown Lands	...	...	...	13,436
Sale of Crown Lands	...	...	...	1,726
Sale of Leases and Licences, plans, etc.	...			2,329
Petty Licences	...	...	...	691
				<hr/>
				\$43,384
				<hr/>

*Trigonometrical Survey.*—This work was begun in October, 1925, after a decision to start on the line from Belize to Garbutt's Falls. A site for a base was chosen on the western side of Manatee Northern Lagoon.

*Traversing.*—85½ miles of road traverse were measured, including the line from Belize to Orange Walk on the proposed Corozal main road.

Other traverses cover 34½ miles and comprise 10 miles of the western boundary, which has now been recut up to within 10 miles of the Mexican frontier.

*Cadastral Work.*—The common routine was followed, two small areas in Toledo District and 11 town lots in Punta Gorda being surveyed. Applications, leases, licences, etc., were dealt with as usual.

**British Honduras, 1926-27.**

Governor.—Major Sir J. A. Burdon, K.C.M.G.

Surveyor-General.—Mr. F. W. Brunton.

*Staff.*—The staff was the same as the year before, save for the departure of one messenger.

*Revenue and Expenditure.*—The revenue, made up from the same sources as recorded last year, fell by \$7,370. Expenditure rose by \$2,410, all of which was offset by a saving from the previous year.

*Trigonometrical Survey.*—This survey—a necessary preliminary to future development—was well begun by the measurement of the Manatee Base, 15,900 feet long, which showed a probable error of 1/780,000. Permanent concrete terminals were set up and connected by a double line of levels, 36 miles long, with Mean Sea-Level at Government House Grounds. Four Europeans took part in the measurement of the base (which was pegged at every 100 feet to facilitate progress), since apparently native labour is not sufficiently expert for minor operations.

The reconnaissance of the base extension and of four of the main stations was executed on the planetable, showing that a satisfactory chain was obtainable.

*Levelling.*—A portable automatic tide-gauge had been purchased and installed at Belize the previous year; its records will be available in three or four years for a precise determination of Mean Sea-Level. A permanent Bench-Mark was fixed in the vicinity so that the zero of the gauge and the local levels of the Colony can be referred thereto at any time. Levelling to the Manatee Base gave a closing error of 0.005 foot (1 inch/16) per mile. Since the closing of a double line of levels may be accidental, the average closure of sections or the mean square error is a better index to accuracy in the absence of circuits.

*Traversing.*—A further length of the western frontier—26½ miles—was opened, but lack of water prevented the traverse from reaching the Mexican border. 5½ miles were traversed to the village of Pueblo Viejo.

*Positional Work.*—A W/T. receiving set was constructed locally with the aid of the Superintendent of Radio—an excellent example of accomplishment by small means. With this apparatus the positions of Gracias-a-Dois Falls, Garbutt's Falls (two important sites in the Colony), and Pueblo Viejo were fixed astronomically.

*Cadastral Work.*—Various parcels of land in Belize, Mesopotamia (soldier settlement), Fort George, and Stann Creek were measured or resurveyed.

*Land Administration.*—The control of Forest Licences passed to the Forestry Department. 602 applications for land were dealt with and the records of fiats, licences, leases, etc., kept up to date.

*Maps and Plans.*—In addition to various local plans, tracings, etc., the Department prepared a contour map of the Colony, a general map at 16 miles/1 inch, and two geological maps.

*Remarks.*—The year constitutes a landmark in the history of the Survey, and the Surveyor-General is to be congratulated on the clear evidence of fruitful enterprise and enduring progress.

### **Ceylon, 1925-1927.**

Governor.—Sir Hugh Clifford, G.C.M.G., G.B.E.

Surveyor-General.—Mr. A. J. Wickwar, F.R.G.S.

Deputy Surveyor-General.—Mr. A. H. G. Dawson.

Assistant Surveyor-General.—Mr. C. R. Lundie, A.M.I.C.E.

Superintendent of Observatory.—Mr. A. G. Bamford, B.A.

*Staff.*—Field.—12 Superintendents of Surveys. 40 Assistant Superintendents of Surveys. 290 to 320 Grade Surveyors.

Office.—4 Assistant Superintendents (Headquarters). 1 Superintendent of Instruments. 1 Accountant. 450 Clerks and Draughtsmen.

Observatory.—1 Superintendent. 1 Astronomer. 4 Technical Assistants.

*Topographical Surveys.*—During the year 1925-26, thirty-seven square miles, comprising the small islands in the north, were surveyed on the 1-inch scale and 2,518 acres of Jaffna town on the 16-chain scale, thus completing the topographical revision survey of the Island. All sheets have been published. The topographical staff consisted of 2 Grade Surveyors in charge of 10 Surveyors. No figures as to cost are available.

*Cartography.*—The new large-sheet 1 inch to 1 mile series is gradually replacing the small-sheet series. The sheets of the new series are printed in colours and show contours and cultivation.

At the present rate of progress in reproduction, the whole island should be covered by the new series by the end of 1928.

*Triangulation.*—Minor triangulation schemes for the control of Block Survey traverses were carried out in several provinces during the year 1926-27; the total area covered was 350 square miles, 26 new observing stations and 71 intersected points being fixed.

The average angular misclosure in 120 triangles was 3.3 seconds. No figures are available to show the cost of these local triangulations.

*Levelling.*—The levelling staff was employed up to the end of December, 1925, in bench-mark construction. During the year 1925-26 34 fundamental bench-marks were constructed of a design similar to that adopted by the Ordnance Survey.

Intermediate bench-marks were constructed along 403 miles of road, and, in addition, the bench-marking of 346 miles of road to be relevelled was supplemented by new type bench-marks.

Field work commenced in February, 1926, and during the year, 481 miles of road with Kurunegala as centre were levelled and a start was made on the road from Diyatalwa to Badulla. All lines, with the exception of two, were levelled forward by one surveyor and back by another. The permissible discrepancy between forward and back levellings was calculated from the formula  $.005 \sqrt{F}$  feet (where 1,000 F is the distance in feet between bench-marks).

The misclosures, uncorrected for errors in the graduation of the staves, obtained in five circuits were :—

Circuit.					Length Miles.	Misclosure. Feet.
S	...	...	...	...	74	0.200
T	...	...	...	...	107	0.149
F	...	...	...	...	138	0.126
G	...	...	...	...	125	0.006
H	...	...	...	...	153	0.010

or an average error of .002 inches per mile.

In November the calibration of staves, with reference to one standardised at the National Physical Laboratory, was taken in hand. All levelling in the future will be done with calibrated staves and the corrections given to the staves when calibrating them will have to be applied to all previous work.

During the year, 22 fundamental and four standard bench-marks were constructed. The latter consist of concrete blocks and are used where no rock formation could be found. Intermediate bench-marking was carried out along 720 miles of road, leaving only 262 miles of the level net to be completed in 1927.

*Tide Gauges.*—At Colombo the Harbour Works automatic tide gauge has not proved satisfactory for a redetermination of mean sea-level and it has been found necessary to construct a new well. At Trincomalee permission is being sought from the Admiralty to erect a tidal observatory in the Naval Dockyard and an automatic tide gauge for this Station is on order.

*Cost of work.*—

Levelling.—Rs.100/59 or £7 10s. per (double) levelled mile.

Bench-marks.—Rs.812 or £61 per Fundamental Bench-mark.

Rs.60 or £4 10s. per Standard Bench-mark.

Rs.12/70 or 19s. per Intermediate Bench-mark, or approximately Rs.26 per mile.

*Block Surveys.*—In 1925, 131,875 acres were block surveyed and settlement surveys were carried out in 160 villages covering 270,912 acres. In 1926, 133,907 acres were block surveyed and the settlement surveys covered 19,940 acres. The detail work for these surveys is carried out by parties averaging 10 surveyors



under an Assistant-Superintendent and is based on rigorous traverses connected to trigonometrical stations, the maximum error allowable being three links per mile. The average cost of these surveys is a little over Rs.5 or 7.5 shillings per acre.

*Town Surveys.*—In 1925, town surveys were carried out over an area of 2,356 acres. No surveys of this description were made in 1926.

*Application and Miscellaneous Surveys.*—4,162 applications were made in 1925 and 5,894 in 1926, when 22,400 acres were surveyed at a cost of Rs.22 or 33 shillings per acre.

*Wireless Work.*—From 1st October, 1925, wireless time signals were sent out on 2,300 C.W. at 11.30 a.m. instead of at 11.30 a.m. and p.m., and 600 spark at 10.30 p.m. instead of at 10.30 a.m. and p.m.

The transmission of signals is improving. From April, 1926, to the end of the year the total number of failures and omissions was 15 out of 275 signals.

A six-valve receiving set has been installed at the Observatory, and signals from Bordeaux and Saigon can be heard. The Observatory participated in the International Longitude Determinations in October-November, 1926, and from the results obtained Ceylon appears to be roughly 200 yards further west than was previously supposed.

*Meteorological Service.*—Work continued as usual and as in previous years was supplemented by the reports of a large number of voluntary rainfall recorders.

*Remarks.*—An efficient network of levels is being rapidly run across the Island, but no consideration seems to have been given to the question of the re-observation of the triangulation net.

It is understood that some policy as to the periodic revision of the 1-inch topographical sheets in the field has been adopted, but it is not clear to the Committee what this policy is, nor to what extent revision work has been carried out during the period under review.

### **Cyprus, 1925-26.**

Governor.—Sir Malcolm Stevenson, K.C.M.G.

Registrar-General and ex-officio Director of Surveys.—Mr. B. T. Watts.

Assistant Director of Surveys.—Mr. P. E. L. Gethin.

*Organization.*—Since the last report there have been a few minor alterations in the personnel of the three branches of the Department. The strength of the Survey Branch was reduced by the Surveyor 2nd Grade, who was previously employed in the drawing office, and two native surveyors (temporary).

*Expenditure.—*

	£
I.—Survey Branch ... ..	11,293
II.—Valuation Branch ... ..	2,979
III.—General Registration Branch ... ..	3,170
Total ... ..	<hr/> £17,442 <hr/>

The cost of Administration, Stores, and Pay Officers has been set proportionately against the three headings.

*Survey Branch.*—During the year the Field Section was organised in two parties, one employed on village and detail chain survey and the other on planetable work.

The country under survey was similar to that encountered the previous year, very rugged with many small holdings, so that progress was slow. The work carried out by the Survey Branch is summarised under :—

(a) *Trigonometrical Section.*—In the Marathasa Valley and Papho-Kykko Forest area, 166 fourth-order points, covering an area of 54 square miles, were fixed and observed by one Surveyor during a period of three months, though 17 days of this was spent in re-poling and observing third-order points that had been blown down.

The cost was £117, or £0.70 per point, observed with a Troughton and Simms 6-inch micro theodolite.

A Brunsviga machine was used for computing the position and heights of the fourth-order points.

(b) *Planetable Survey at 1/5,000.*—This comprised the rugged area south of and including Adelphi Forest, the Evrychon Valley, and the more open country round Levka. An area of 94,333 acres (32,755 acres of forest included) was surveyed in 124.8 man-months. The average size of cultivated plots was 1.11 acres and of uncultivated plots, 9.4 acres. The total cost of the work was £4,072, or about 10d. an acre, or £27 a square mile.

(c) *Traverse and Survey of Villages and Village Gardens.*—Eight villages were traversed in  $2\frac{1}{2}$  man-months by theodolite and chain, 73 points being fixed per village and the chainage averaging 5.3 miles per village. The total chainage for the village garden traverses was 164 miles, 2,024 points being fixed in 14 man-months.

Eighteen villages averaging 26 acres in area and 172 plots per village were surveyed in 14.4 man-months at a scale of 1/1,250. 637 acres of village gardens were also surveyed in 36 man-months.

The total cost of traverse and survey was £895.

(d) *Detail Chain Survey, Scale 1/2,500.*—In five months one man traversed 96 miles with theodolite and chain, fixing 608 points, and in 12 months three men chain surveyed an area of 2,846 acres.

The total cost of the detail chain survey was £3,245.

(e) *Examination*.—During the year, 37 villages, 114 planetable plans and 240 acres of detail surveys were examined by the two officers in charge and their assistants.

(f) *Varosha Town Survey on a Scale of 1/1,000*.—The survey of a portion of this town was carried out by two men, 136 acres being covered in three weeks. The cost was £65, or about 10s. an acre.

(g) *Topographical Survey*.—About 1,400 square miles were reduced during the year from the 1/5,000 scale to one of two inches to one mile, and 146 square miles were contoured in the field.

(h) *Drawing, Plotting, and Computing*.—

#### RECORD OF WORK.

Nature of Work.	Clerks employed.	Scale of Plans.				
		1/1,000.	1/1,250.	1/2,500.	1/5,000.	1/31,680
Plans plotted by co-ordinatograph ...	1	26	27	9	68	4
Area plotted (acres) ...	3	877	750	1,610	—	—
Plans checked (No.) ...	1	—	32	—	119	—
Plans fair-drawn (No.) ...	3	25	30	1	112	—
Plans typed (No.) ...	3	25	39	1	110	—
Plans examined (No.)...	1	19	47	1	121	—
Plans sun-printed (No.)	1	152	524	104	1,792	—
Areas computed (acres)	3	75,645 of cultivation, 9,970 of uncultivated land, 10,921 of forest.				

Various 597

*Valuation Branch*.—The valuation of the whole of the Kyrenia District was completed and the general rate of taxation (*Verghi Kimat*) adopted as from 1927.

The valuation of the Nicosia and Papho Districts was continued.

*General Registration Branch*.—During the year, 20,992 title deeds were issued for 17,277 plots. The average daily output in title deeds per clerk was nearly 13, and the registration fees collected during the year amounted to £1,011.

#### Cyprus, 1926-27.

Governor.—Colonel Sir Ronald Storrs, Kt., C.M.G., C.B.E.

(Assumed duty 30th November, 1926.)

Registrar-General and ex-officio Director of Surveys.—Mr. B. T. Watts.

Assistant Director of Surveys.—Mr. P. E. L. Gethin.

*Organisation*.—No important alterations have been made in the organisation of the Department since the last Report.

#### Expenditure.—

	£
I. Survey Branch ... ..	10,901
II. Valuation Branch ... ..	2,840
III. General Registration Branch ... ..	3,147
Total ... ..	£16,888

The cost of Administration, Stores, and Pay-Officers has been proportionately divided under the three headings.

*Survey Branch.*—During the year the survey of all cultivated lands required mainly for valuation purposes was completed and the planetable personnel were transferred to Forest Surveys. The detail survey on scales of 1/2,500 and 1/1,250 of the Solea and Marathassa valleys was completed. As before, the country under survey was of a very rugged nature, the valleys being deep and composed mainly of small gardens.

The resurvey of Nicosia Town has been commenced. As no records were made at the time of its original survey in 1911-12 it was found impossible to add new detail to the old plans with any degree of accuracy, and the disappearance of many of the traverse points added to the difficulties in areas outside the ramparts which have now become valuable building sites.

These difficulties show the necessity of keeping proper records and of erecting permanent marks over survey points.

The work carried out by the Survey Branch is summarised under :—

(a) *Trigonometrical Section.*—In the central area of the Paphos Forest 246 fourth-order points covering an area of 62 square miles were fixed and observed during a period of 104 days, 30 of which were spent in repoling and observing third and fourth-order points that had been blown down or destroyed.

The cost was £172 or £0.70 per point, observed with a Troughton and Simms 6" micro theodolite.

As before the positions and heights of all points were computed by means of a Brunsviga machine.

(b) *Planetable Survey at 1/5,000.*—This comprised the rugged area south and east of Troodos, including the Troodos Forest, the Marathassa valley, and the east side of the Papho Forest. Rain and snow retarded the work during February, 1927. An area of 59,182 acres (42,704 acres of forest included) was surveyed in 87.6 man-months. The average size of cultivated plots was 0.97 acres and of uncultivated plots 4.26 acres. The total cost of the work was £2,657 or about 11d. an acre or £29 a square mile.

(c) *Traverse and Survey of Villages, Village Gardens, and Irrigated Fields at 1/1,250 and 1/2,500.*—Eight villages were traversed in five man-months by theodolite and chain, 94.6 points being fixed per village and the chainage averaging 3.5 miles per village. The total chainage for the village garden traverses was 48 miles, 1,704 points being fixed in nine man-months. Twenty villages averaging 35.2 acres in area and 202.9 plots per village were surveyed in 31.2 man-months.

Two thousand four hundred and seventy-nine acres of village gardens and irrigated lands were also surveyed in 52.8 man-months.

The total cost of these surveys was £3,829.

(d) *Examination*.—During the year, 21 villages, 80 planetable plans, and 2,479 acres of detail surveys were examined by the two officers in charge and their assistants.

(e) *Resurvey of Nicosia Town on 1/500*.—566 points were fixed in six man-months, the total chainage being 26.5 miles at a cost of £229 or £8.6 per mile.

The average chainage error of the main lines was one in 4,500.

(f) *Topographical Survey*.—About 825 square miles were reduced during the year from the 1/5,000 scale to one of two inches to one mile.

(g) *Plotting, Drawing, and Computing*.—

Nature of Work.	RECORD OF WORK.					
	Clerks employed.	1/500.	1/1,000.	1/1,250.	1/2,500.	1/5,000. 1/31,680.
Plans plotted by co- ordinatograph (No.)	1	1	1	43	17	57 10
Areas plotted (acres)	4	—	—	1,087	2,033	— —
Plans checked and numbered (No.) ...	1	—	—	29	16	106 —
Plans fair-drawn (No.)	3.63	—	23	40	13	92 —
Plans typed (No.) ...	2.24	—	23	23	8	87 —
Plans examined (No.)	.82	—	17	23	—	75 —
Plans sun-printed ...	1	—	129	394	145	2,042
Areas computed (acres) ...	3.3	49,351	of cultivation,	6,970	of uncultivated land,	Various 623 and 2,590 of forest.

*Valuation Branch*.—The valuation of the Nicosia and Papho Districts continues.

*General Registration Branch*.—During the year, 26,871 title deeds were issued for 15,583 plots and the registration fees collected amounted to £2,362.

### **Federated Malay States and Straits Settlements, 1925 and 1926.**

Governor of the Straits Settlements and High Commissioner for the Federated Malay States.—Sir Laurence N. Guillemard, G.C.M.G., K.C.B.

Surveyor-General.—Mr. V. A. Lowinger.

Assistant Surveyor-General.—Mr. C. J. Perkins.

Assistant Surveyor-General, Topography.—Mr. J. N. Sheffield.

		Expenditure.	Re-imbursement.	Per Cent.
		£	£	
1925.	Federated Malay States	1,450,393	374,506	25
	Straits Settlements ...	477,305	60,803	12½
1926.	Federated Malay States	1,581,943	494,124	31
	Straits Settlements ...	460,974	92,805	20

*Trigonometrical*.—*Federated Malay States*.—No trigonometrical work was undertaken in either 1925 or 1926, with the exception of the provision of secondary and tertiary points for Pahang and standard levelling in Kinta.

*Straits Settlements.*—No trigonometrical work was undertaken.

*Photo-Litho Department.*—The demand for maps and plans has increased steadily and is being met by the addition of a new printing press and encouraged by a Map Sales Office in Ipoh.

The standard of map production is high, both in drawing and in lithography, and the general appearance of the maps produced is very pleasing. In the one inch to one mile map of Singapore and Johore, now in the course of production, more detail has been shown than the scale allows; this arises from the difficulty of generalising from large-scale material. But, considering the amount of information, the map is clear and legible. This is mainly attributable to the excellent and delicate colours (a recognised feature of Federated Malay States publications), to the bold yet neat type, and to the expressive symbols.

*Instrument Repair Section.*—With the exception of theodolites and levels, all instruments now used in the field are made in this Section, which appears to be fully justifying its existence.

The theodolites and levels are also periodically overhauled and examined, which adds greatly to their life and value.

*Topographical, 1926.*—

	<i>Square Miles.</i>	<i>Cost per Square Mile.</i>	<i>Square Miles, per Man, per Month.</i>
2 in. to 1 mile Standard Sheet—		\$	
Kedah... ..	352	115	4.0
Pahang ... ..	622	—	2.77
4 in. to 1 mile—			
Penang ... ..	34.6	—	.75
Town surveys at various scales	2.1	—	—

A certain amount of miscellaneous surveys and revision was also undertaken.

The main factor both in trigonometrical and topographical work was the extreme difficulty of recruiting coolies, due largely to the high wages now paid by prosperous rubber estates, and also in part to the fact that the old time "up-country" Malay appears to be dying out. There is no doubt that the provision, if necessary by importation, of a suitable type of labour is a problem which requires much thought in the future.

In the case of the Federated Malay States, about 33 per cent. of the total area has now been mapped on a standard scale of 1 inch to 1 mile.

The trigonometrical work consists of a main geodetic chain covering the whole peninsula. Secondary and tertiary trigonometrical control is undertaken just before the topographical work in any given area is undertaken, and the proportion of the country covered by secondary control is only slightly in excess of that actually mapped on the standard scale.

An excellent table is given in the report, showing all the necessary statistical details of surveys in hand, an example which might be followed by many other Survey Departments.

The 4-inch to one mile survey of Penang Island shows a monthly out-turn of three-quarters of a square mile per man, which, even allowing for the difficulties of the terrain, seems unaccountably low.

*Revenue Surveys.*—This Branch surveyed in 1925, 6,923 lots for alienation, with an acreage of 45,608 and 200,000 acres of forest reserve land.

In 1926 there was a large increase in applications for survey, due to the prosperous condition of the country.

The reimbursements from Revenue Survey sources amount to nearly \$300,000 for 1926, as against an expenditure of \$820,000.

The detailed statement as to the position of Revenue Surveys, with reference to the requisitions received, is clear and concise and indicative of good organization. The report shows evidence of an efficient Department.

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### Fiji, 1925.

Governor.—Sir Eyre Hutson, K.C.M.G. (from April, 1925).

Commissioner of Lands.—Mr. C. A. Holmes.

*Staff :—*

Surveyors, 1st Grade	...	...	...	...	...	...	5
Surveyors, 2nd Grade	...	...	...	...	...	...	5
Surveyors, 3rd Grade	...	...	...	...	...	...	1
Cadets	...	...	...	...	...	...	2
Draughtsmen	...	...	...	...	...	...	2
Draughtsmen, 2nd Grade	...	...	...	...	...	...	2
Native Draughtsmen	...	...	...	...	...	...	1
Clerks	...	...	...	...	...	...	2
Messengers	...	...	...	...	...	...	1
Total							21

Of these, eight surveyors and the native draughtsmen are engaged on the Tribal Boundary Survey.

*Minor Triangulation.*—The Trigonometrical Survey of Fiji, including the principal islands with the exception of Kandavu, was completed and published in 1917. The Lands Department is following the progressive course of breaking down the Primary Triangulation as opportunity offers. During the year, four of these "minor trigs" were established in Vanua Levu, Mathuata Province.

The total number of minor stations fixed by officers of the Department is 199 in the larger main island (Viti Levu) and 90 in the smaller (Vanua Levu).

*Traverses.*—Five and one-half miles of standard traverse were measured in Rewa Province. It was found that Indians and natives

were removing the old marks; a new type of concrete slab, 15 × 15 × 3 inches, containing a 1 inch galvanised pipe, 18 inches long, was therefore used on this traverse.

*Tribal Boundaries.*—The survey of the *Matangali* boundaries was begun in 1912. During 1926 field work was carried on in the Provinces of Rewa and Mathuata, 35,812 acres in 510 lots being covered at a cost of £2,242, i.e., 15d. per acre or 85s. per *matangali*. The Commissioner points out that, as the staff employed consisted of four new men, progress was slow and was hampered by the relative smallness of the tribal lots and the density of the undergrowth. The vegetation will be a constant deterrent, except in the *Talasinga* country on the west; in the uplands of the east the difficulty of the upper will replace that of the undergrowth and there appears little doubt that the *Veikau* country, though not generally unhealthy, will offer the greatest impediments to survey, particularly where, on ground whose minor features are so prolific as to be incapable of enumeration, boundaries are somewhat dubious.

*Miscellaneous Surveys.*—The miscellaneous work included the following surveys: 7 Crown Leases, 41 Native Leases, Scenic Reserve, Catchment Area at Lautoka, Dairy Scheme, School Site, Cemetery.

*Land Registration.*—The Department deals with a large volume of work involving the leasing and alienation of land and the examination of the surveys consequent thereon. Information, largely statistical, with reference to this Branch is admirably set forth in the report.

Irregularities were met in 1924 by amended survey regulations whereby power was acquired to cancel approval of leases not executed within six months. 581 plans of surveys by 6 Licensed Surveyors, covering 7,878 acres, were examined, plotted on the standard sheets, and passed for issue of title. Some information as to the number rejected for technical reasons on first examination would be of interest.

The addition of a Forestry Officer would facilitate some of the work of the Department, since the Colony is somewhat ignorant of its resources in timber and other woods.

Of the 4,532,620 acres (7.082 square miles) which the Colony is estimated to contain, 923,800 are alienated. Of this total 531,350 acres are freehold, 372,000 are native leaseholds and 20,400 are Crown leases.

*Plans and Prints.*—1,170 tracings were prepared, in the main for official use. The absence of zincographic printing prevented the Commissioner from illustrating his report by graphs. Since no such plant appears to exist in the Colony, and prints must frequently be demanded by various Departments who have to send their work abroad, it is a question if the Lands Department can



much longer continue to depend on the slow and expensive process of reproduction by hand; as mapping increases, power presses, with colour printing when required, become necessary equipment for a Survey Department. A start might easily be made with the inexpensive Vandyke process.

### Gold Coast, 1925 and 1926.

Governor.—Brigadier-General Sir F. G. Guggisberg, K.C.M.G., D.S.O.

Surveyor-General.—Lieutenant-Colonel R. H. Rowe, D.S.O., M.C., 1st April, 1925, to 26th October, 1926. Mr. J. Glendinning, B.Sc., 27th October, 1926, to date.

Deputy Surveyor-General.—Mr. J. Glendinning, 1st April, 1925, to 26th October, 1926. Mr. W. F. Mindham, appointed but had not taken up his duties at the end of the year.

*Topographical Work.*—By June, when the field season for topography closes, it was estimated that the state of the topographical map would be as follows :—

	Sq. Miles.
Surveyed in the Northern Territories before the war ... ..	10,000
Surveyed between 1920 and 1927 ... ..	45,600
Still unsurveyed ... ..	36,400
Approximate area of Colony ... ..	92,000

The policy of setting aside a definite sum of money for the production of a topographical map has fully justified itself. The rapid development of the Gold Coast in the past seven years has been greatly assisted by this survey. Anyone who is doubtful whether the topographical survey repays its cost as a means of development should compare the alignment of the old Sekondi-Kumasi railway, located without a map, with its new alignment and with that of the Central Province Railway where the preliminary alignment was chosen from the one-inch map. The additional cost of working the old railway on a bad alignment, and the cost of the deviations found necessary later, exceed many times the cost of the whole topographical map of the Colony.

The special vote of 1920 for the topographical survey has now been exhausted and the original programme completed. The special party of Royal Engineer officers and non-commissioned officers are not, then, to be further employed on the production of the topographical map, which will be carried on by a permanent staff of two Europeans and ten Africans. The part of the country where intensive development is going on has been mapped, but some of

the earlier sheets now require revision, and it does not seem likely that further progress will be rapid.

The following figures of the cost of topographical work are instructive as showing the reduction in costs as the surveyors got better practised in the methods required in a forest-clad country and as more of the work could be taken over by trained African Surveyors.

	£	s.	d.
(1) Average cost of a Field Sheet in 1921 ... ..	1,190	0	0
(2) Average cost of a Field Sheet in 1926 ... ..	592	0	0
(3) Average cost per sq. mile in 1921 ... ..	4	2	2
(4) Average cost per sq. mile in 1926 ... ..	1	16	2
(5) Cost of one Field Sheet surveyed by one European Surveyor with planetable in 1926 ... ..	340	0	0
(6) Cost of Survey of One Standard Sheet by African Surveyors on 1/125,000 scale in 1925 ... ..	703	0	0
(7) Cost of Survey of one Standard Sheet by African Surveyors on 1/125,000 scale in 1925 per sq. mile ... ..	0	12	0

The above figures include field costs and purchase of stores, but not the cost of framework or salaries during leave.

The Topographical Branch has also sent parties to carry out the surveys in connection with the Boundary Commissions delimiting eastern and western frontiers.

*Cadastral Branch.*—The most important work done during the two years was the continuation of the triangulation for the main framework of the Colony. The sum originally voted for the special control party became exhausted at the end of the financial year 1926-27, but a sum was voted for its continuance on a reduced scale in 1927-28. It is satisfactory to learn that a small permanent control section is to be added to the Department.

The work done by this section affords a good example of the value of setting aside a definite sum and of working to a definite programme. Until this policy was adopted the framework of the Colony was in a chaotic condition, the work being done whenever surveyors could be spared from the current work of the Department. Now as the result of four years' steady work by one party, the area inside the triangle Accra-Kumasi-Sekondi has been covered by a first-class control with the result that all surveys undertaken in that area can be properly located. It is to be hoped that the policy of keeping a small permanent party at work to extend this framework will be persevered with.

A complete record of the work done by this party will shortly be published by the Gold Coast Survey.

The following gives a brief record of the work done :—

No. of Primary Trig. Points observed	...	...	54
No. of Primary Trig. Points reconnoitred but not observed	...	...	4
No. of Secondary Points fixed	...	...	5
No. of Base Lines measured	...	...	2
Miles of Primary Traverse	...	...	147
Miles of Spirit Levels	...	...	167

Angular measurements were taken with a 6-inch micrometer theodolite by Cooke, Troughton and Simms, in most cases to heliographs. The longest line observed was 46 miles. The mean triangular misclosure was 1.66 seconds. All results were adjusted by the method of least squares.

The closure obtained on the base at Obuasi was as follows :—

Length of Obuasi base as measured	...	19,903.96 ft.
Length of Obuasi base as computed from Akuse base	...	19,903.34 ft.
Difference (roughly 1/30,000)	...	.62
Azimuth observed at Obuasi	...	189° 34' 43". 0
	...	189° 34' 37". 54
		5". 46

Costs.—

	£	s.	d.
Measurement of base at Akuse. Length 4½ miles partly scrub, partly grass. Measured twice with invar tapes in catenary. Including all preparatory work	about 693	0	0
Measurement of base at Obuasi in forest measured as above	about 760	0	0
Average cost of trig. point, including reconnaissance, clearing, and observing	174	0	0
Cost per mile of primary traverse Apam-Oda-Ochereso (including levels)	30	3	8

The permanent cadastral branch carried out a full programme, consisting principally of town surveys and the lay-out of township sites.

It is the policy of the Department to encourage licensed surveyors and to leave all paying work as far as possible to them. At the same time the standard of the test to be passed before a licence is issued is very properly maintained at a reasonably high level.

The following figures give the approximate cost of certain classes of departmental work.

**Traverses—**

Along Roads, £6 to £11 per mile.

Medium Bush, £14 per mile.

Dense Bush and Scrub, £23 to £30 per mile.

**Levels—**

Along Roads, £1 10s. per mile.

Medium Bush, £2 10s. per mile.

Dense Bush and Scrub, £6 per mile.

Contouring, 15s. per acre on 1/1,250 scale.

**Town Survey work—**

Detail Survey, 20s. per acre.

These costs include all work actually done in the field and computations, but not plotting of plans and checking in the office. They include an addition of 20 per cent. to cover cost of supervision.

*Accuracy.*—For licensed surveyors no work with a closing error greater than 1/3,000 is accepted. Departmental traverses usually close to between 1/10,000 and 1/20,000.

*The Wireless Framework Party.*—The framework for the half-inch topographical map is now provided entirely by astronomical latitudes and wireless longitudes. This system is found to give sufficient accuracy for the control of the map in view of the methods of survey employed, and is very much cheaper than the former method of a network of theodolite traverses.

Observations have also been taken at a number of primary trig. points in order to determine the deflection of the vertical.

Observations to determine the magnetic variation were also taken by this section and a chart showing isogonals at 30-minute intervals for 1st January, 1927, has been published.

Much valuable information about the design and use of wireless receiving sets and of chronographs has been gained. Space does not permit of a summary; those interested should consult the full report of the Gold Coast Survey Department.

*The Survey School.*—The excellent work done by the school since its opening in 1921 is now bearing fruit in the reduction of costs, as the trained African Surveyors take up their duties in the field.

A new building to accommodate 50 pupils is being built at Accra, and the courses and conditions of entry are being revised in view of the opening of the college at Achimota, which is expected to provide a more educated type of candidate.

*Reproduction.*—This branch is now reproducing all the maps and plans required for local use. A large amount of work has been done for other Departments and for Sierra Leone. The output has been increasing so rapidly that it has been necessary to increase the accommodation and instal an additional flatbed machine.

The average cost of reproducing various classes of map are given below :—

	£
One-inch field sheet (area about 290 square miles), drawing, reproducing in five colours, and printing 300 copies ... ..	40
Half-inch standard sheet (area about 1,160 square miles), drawing, reproducing in five colours, and printing 600 copies ... ..	85
1/1,250 Cadastral Town Plan, drawing, reproducing in one colour, and printing 100 copies ... ..	20

### **Hong Kong, 1925 and 1926.**

Governor.—Sir R. E. Stubbs, K.C.M.G. ; Sir Cecil Clementi, K.C.M.G. (from 1st November, 1925).

Director of Public Works.—Mr. H. T. Creasy.

Superintendent of Surveys.—Mr. E. B. Reed.

*Organisation, 1925.*—Until the 31st December, 1925, the Crown Lands and Survey Offices were combined and included a staff of 14 European Surveyors, 7 Chinese Assistant Surveyors, 12 Chinese Apprentice Surveyors, and 2 Chinese Student Surveyors, under the direction of an officer designated the Superintendent of Crown Lands.

At the beginning of 1926 the Crown Lands and Survey Office was re-organized and made two separate sub-departments of the Public Works Department. The whole of the survey work of the Colony is now under the control of a Superintendent of Surveys.

*Organisation, 1926.*—The Survey Office is now a separate sub-division of the Public Works Department and carries out the whole of the survey work of the Colony.

#### *Staff.*—

#### *In the Field.*

1925.	1926.
11 European Surveyors.	11 European Surveyors.
8 Chinese Surveyors.	11 Chinese Surveyors.
17 Apprentice and Student Surveyors.	13 Apprentice and Student Surveyors.

#### *In the Office.*

1 European Draughtsman.	1 European Chief Draughtsman
12 Chinese Draughtsmen.	14 Chinese Draughtsmen.
1 European Clerk.	1 European Clerk.
6 Chinese Clerks.	6 Chinese Clerks.
3 Chinese Computers.	3 Computers.
There are also : 89 Survey Coolies.	85 Survey Coolies.

*Cost—exclusive of office accommodation.*

	1925.		1926.
	\$		\$
Salaries ... ..	185,531		110,724
Conveyance Allowances ... ..	13,000		7,891
Coolies' Wages ... ..	11,614		13,172
Rent Allowances ... ..	10,925		8,039
Survey Expenses,			
Transport ... ..	7,230		6,313
Total for 1925	228,300	Total for 1926 ... ..	146,139
Total for 1924	208,487	Total for 1925 ... ..	228,300

*Training of Chinese Surveyors.*—The School started in 1922 for this purpose is stated to be productive of good results. No figures are given to indicate the number of students trained or the proportion of them that prove subsequently to be of value to the Department.

*Chinese Surveyors, 1926.*—The scheme for training Chinese Surveyors is, temporarily, in abeyance owing to lack of European staff, but it is interesting to learn that they became efficient minor control observers and cadastral field hands.

*Control Surveys.*—The triangulation of Hong Kong would seem to be a patchwork of portions observed at different epochs and more or less independent of each other. In 1927 two small additions to this control were made, and are referred to as "very good" and "sufficiently accurate" to check certain traverses respectively. No details of observation or closing error are given.

The Survey Department provided lists of positions on which to base a new military survey. These lists gave both geographical and plane rectangular co-ordinates. In many cases, however, these alternative values did not agree.

In spite, therefore, of evidence of careful re-observation in places, the trigonometrical control is evidently far from perfect, and may fail to provide sufficient accuracy for so important an area and so dense a population. The area concerned is small. Fresh observation and consistent adjustment can in no case be a difficult task. The first step should be to review all the field measures and to adjust the good material, leaving fresh extension or perhaps some necessary re-observation to be carried out subsequently.

In the same way the traverse control is continually referred to, but there is no mention of closing rule or of individual error. It is impossible, in fact, to gauge the work from the style of report which is submitted.

*Large Scale Surveys in 1925, 1926.*—Under various headings, which appear to consist in the main of engineering plans, for road and drainage lay-out, and of cadastral plans, for general municipal

use and revenue assessment, some 1,150 acres in 1925 and 2,000 odd acres in 1926 have been finished. The scale is not always stated. It appears to be generally 1/600 in the field, reduced eventually to 1/2,400 for cartography.

*Topographical Survey.*—The new 1/25,000 map in 20 sheets has been begun by the War Office. The control of this map is provided by the triangulation which has already been described and which was added to in the field, and by a large number of instrumentally-measured spot heights.

There is no indication in either report of any direct return, as, for example, registration fees, earned in respect of the survey operations described, and, as before, the reports contain no technical or statistical details whereby the accuracy, efficiency, and economy of the work may be judged. They are, therefore, of little value as indications of the present state of the Survey.

### Jamaica, 1925.

Governor.—Brigadier-General Sir S. H. Wilson, K.C.M.G.,  
K.B.E., C.B.

Surveyor-General.—Mr. W. Anthony Baker.

#### *Expenditure and Revenue.*—

<i>Heading.</i>	<i>Expenditure.</i>		<i>Total.</i>	<i>Revenue.</i>
	<i>Personal Emoluments.</i>	<i>Other Charges.</i>		
	£	£	£	£
Surveys ... ..	196	193	389	—
Land Records ... ..	4,114	573	4,687	6,927
Crown Land Development	17	16	33	3
Cutting Timber ... ..	14		14	316
Totals ... ..	£4,341	£782	£5,123	£7,246

The expenditure shows a decrease of £1,000 on the previous year.

*Staff.*—This consists of the Surveyor-General and an Assistant, two Surveyors, one Draughtsman, and five Clerks—10 members in all.

*Surveys.*—Since one member only of the Staff was available for fieldwork, and he for three months only, Licensed Surveyors have been employed on Government property. These surveys included some closed tertiary traverses, 44½ miles in all, executed at a daily rate of about ½ mile, showing errors of closure from 1/300 to 1/6,450 and costing nearly £9 per mile.

*Land Registration, etc.*—The nature of the work of the Department may be gathered from the expenditure and revenue tabled above. The following is a summary of the work passing through the Department.

	<i>No.</i>	<i>Average.</i>	<i>Amount.</i>
Applications for land received ... ..	64	443	
Applications satisfied ... ..	39	393	
Titles issued on payment by instalment...	118	1,136	
"    "    for Cash payment ... ..	13	100	
Purchase money received ... ..	—	—	£2,682
Town (35) and other lots (69) leased ... ..	104	—	
Predial tenancies ... ..	3,845	—	
Rents collected during year ... ..	—	—	£3,738
Notifications under Forfeiture Law ... ..	248	10,301	
Interlocutory judgments obtained ... ..	118	7,284	
Holdings advertised for forfeiture ... ..	2,371	9,870	
Holdings freed on payment of taxes ... ..	985	4,881	
Taxes and costs recovered (net) ... ..	—	—	£2,440
Holdings (forfeitable) ... ..	1,386	4,989	
Interlocutory judgments reached ... ..	1,245	3,067	
Plans examined and reported ... ..	529	—	
Plans re-submitted, examined and reported ... ..	378	—	
Diagrams prepared for registration	{ Crown 115 } { Private 368 }	—	£373
of title.			

84 per cent. of the plans submitted by Licensed Surveyors were rejected in 1924; this year the percentage fell to 71, which is still a high percentage, the more so since it is admitted that the checking of these plans is defective.

680 notices to quit and 285 levy warrants were served on predial tenants, of whom 25 per cent. thus definitely fail to respond to their obligations.

The proceedings under the Forfeiture Law refer to a period of five years.

### Jamaica, 1926.

Governor.—Sir R. E. Stubbs, K.C.M.G.

Surveyor-General.—Mr. W. Anthony Baker.

*Expenditure and Revenue.*—The several disbursements and returns are neatly summarised in the Report.

<i>Heading.</i>	<i>Expenditure.</i>		<i>Total.</i>	<i>Revenue.</i>
	<i>Personal Emoluments.</i>	<i>Other Charges.</i>		
	£	£	£	£
Surveys ... ..	40	60	100	—
Lands Records ... ..	4,297	726	5,023	7,990
Crown Land ... ..	—	—	—	—
Development ... ..	18	62	80	7
Cutting Timber ... ..	17	—	17	341
<b>Totals ... ..</b>	<b>4,372</b>	<b>848</b>	<b>5,220</b>	<b>8,338</b>

These figures confirm the statement that the work is mainly that of a Land Department, not of a Survey Office. In this case the title of Surveyor-General is somewhat of a misnomer. The £100 spent on surveys represents the work of one surveyor for three weeks, supplemented apparently by some work put out on



contract. The surveys included a few traverses, extending to 14 miles at a rate of  $\frac{1}{2}$  mile per diem and at an average cost of £8 6s. per mile. Closing errors varied from 1/420 to 1/1,953, indicating tertiary work.

The following table summarises the Land Work of the year:—

	No.	Acreage.	Amount.
Applications for land received ... ..	24	120	
Applications satisfied ... ..	6	64	
Titles issued on payment by instalment... ..	226	1,986	
"    "    for cash payment ... ..	12	19	
Purchase money received ... ..	—	—	£2,495
Town (31) and other lots (70) leased ... ..	101	—	
Predial tenancies ... ..	3,980	—	
Rents collected during year ... ..	—	—	£4,169
Notifications under Forfeiture Law ... ..	247	10,294	
Interlocutory judgments obtained ... ..	117	7,277	
Holdings advertised for forfeiture ... ..	2,693	10,565	
Holdings freed on payment of taxes ... ..	1,051	5,065	
Holdings forfeitable ... ..	1,642	5,500	
Final judgments on remaining forfeits ... ..	850	1,912	
Interlocutory ditto ... ..	395	1,155	
Plans checked (increase over 1922, 120 %)	1,409	—	
"    examined and reported ... ..	915	—	
"    re-submitted ... ..	494	—	
Diagrams prepared for registration of title.	{ Crown 209 Private 552	— —	} £477
Plans copied (increase over 1922, 100 %)	1,747	—	
Blue Mountain Forest Reserve ... ..	—	28,600	
Ditto, already in hands of Crown ... ..	—	22,250	
Spring Garden Land Settlement ... ..	44	108	

The proceedings for forfeiture listed above extend over six years, the statistics given bringing the situation up to date.

Of the plans submitted for registration of title, 54 per cent. were rejected on first submission, somewhat of an improvement over the record of the previous two years.

Land settlement is not making rapid progress.

### Nigeria, 1925 and 1926.

(Period from 1st April, 1925, to 31st December, 1926.)

Governor.—Sir Hugh C. Clifford, G.C.M.G., G.B.E.; Sir Graeme Thomson, G.C.M.G., K.C.B. (from November, 1925).

Surveyor-General.—Mr. A. Cleminson, 31st March, 1925, to 14th December, 1925; Captain T. J. Waters, R.E., 15th December, 1925, to 31st December, 1926.

Deputy Surveyor-General.—Captain T. J. Waters, R.E., 31st March, 1925, to 14th December, 1925; Captain J. Calder Wood, M.C., December, 1926.

Assistant Surveyor-General.—Captain T. H. Galbraith, M.C.

Organisation.—The Department is organised as follows:—

(a) Headquarters.

(b) Trigonometrical Branch, under Deputy Surveyor-General.

(c) Topographical Branch, under Deputy Surveyor-General.

(d) Cadastral Branch, Southern Provinces, under an Assistant Surveyor-General.

(e) Cadastral Branch, Northern Provinces, under an Assistant Surveyor-General.

The Headquarter Office deals with the general administration of the Department. The Trigonometrical and Topographical Branches, Computation Section, Meteorological Office, Wireless Time Signal Station, Survey School, and Reproduction Section are directly under Headquarter control.

(b) *Trigonometrical Branch*.—After the war the state of the main framework of the Colony was as follows: There were four patches of isolated triangulation near Abeokuta, Bauchi, Kano, and Udi.

Each of these had been surveyed for a specific purpose and the order of accuracy was only sufficient to achieve that purpose. They were consequently of no value as parts of a main framework of the Colony. It was realised that this state of things was unsatisfactory and that, so long as the Department was forced to employ all its personnel on urgent surveys of a local nature, matters would only grow worse.

It was accordingly decided, after consultation with the Colonial Survey Committee, to start a main framework for the Colony on a definite programme, with surveyors who were to be allotted definitely to that task. A start was to be made by reobserving the existing triangulation and then connecting it together. Eventually it was to be extended to form a "grid" at about  $1\frac{1}{2}^\circ$  interval. It was estimated that this programme could be carried out by three observers in 10 years.

A rectangle of this grid has now been completed joining Kano, Jos, Minna, and Zaria. By the end of the 1926-27 season it was hoped that this rectangle would be connected to Udi and Abeokuta. The fieldwork during the period under review was carried out by two groups.

Group No. 1, with one European, who was responsible for reconnaissance, beaconing, and observation, carried the triangulation across from Minna to Kano, where a closure was made on the base.

The mis-closure with astronomical observations was only a fraction of a second in latitude and longitude and about 12 seconds in azimuth.

The statistical results of this triangulation show:—

Main stations occupied, 50.

Area covered, 6,950 square miles.

Average triangular error, 1.99".

Cost per square mile, 3s. 8d.

Group No. II, also with one European, was only in the field during 1926. This group started northwards from Udi and was much hampered by the difficult nature of the country.

The summary results were :—

Main stations occupied, 11.

Area covered, 320 square miles.

Average triangular error, 2.14".

Additional points reconnoitred and beacons, 10.

Area reconnoitred in advance, 115 square miles.

The computation of final co-ordinates is being delayed until the triangulation has been joined to Lagos and certain other closures are made. It is hoped that this will be completed in 1927-28.

The report contains three pages devoted to the listing of provisional geographical co-ordinates of major and minor vertices of three trigonometrical chains.

(c) *Topographical Branch*.—Owing to an overplus of work at the minesfield this Branch was closed for three months in 1925. Six sheets on the scale 1/125,000 were completed during the period. The report contains the Okigwi Sheet, printed in five colours. This shows the drainage of the district very clearly. The lettering, naturally enough, is somewhat unfinished, though seldom lacking clarity. The register is well preserved. The work, done under tropical conditions, reflects credit on producer and reproducer alike.

A party organised for the Minna gold areas met with less success. It is obvious that prolonged training and severely selective tests are necessary to secure northern natives competent to perform topographical duties.

(d) *Cadastral Branch, Southern Provinces*.—The staff in the Southern Provinces is organised in three Groups, centred on Lagos, Aba, and Warri. For survey purposes "towns" are distinguished from "country lands." "Country" surveys are generally not contiguous and have to be referred provisionally to a datum obtained by traverse from adjacent properties, with a check azimuth; or, rarely nowadays, to a datum partially fixed by an observed latitude and azimuth. These "country" surveys, conducted by Africans, are inexpensive and apparently considered sufficiently good to be incorporated by adjustment into a cadastral framework as soon as the Colony is in a position to undertake this onerous duty.

The laborious cadastral revision of Lagos Island for the Lagos Town Council was completed during the year on the scale of 20 feet/1 inch for reduction to 88 feet/1 inch or 5 feet to 1 mile. An outbreak of plague necessitated a further survey of 700 acres at Yaba, where properties had to be acquired.

The cost of cadastral work varied from about 20s. per man-power day in Benin to about 30s. in Aba, the expense for revision being 13s. 4d., for Forest Reserves, 22s. 6d., and for Lay-outs, 30s. 8d. per man-power day; these figures include an additional 20 per cent. for overhead charges. No doubt future statistics will show the output against the same unit of work.

(e) *Cadastral Survey, Northern Provinces*.—This Branch is organised in two Divisions: (1) Minesfield, (2) Kano.

(1) *Minesfield Division*.—At the end of 1925 the outstanding applications for mining and exclusive prospecting leases had increased by 30 per cent. over the beginning of the year. A Royal Engineer party under Captain B. T. Godfrey-Fausset, M.C., was therefore sent out to cope with this rapidly-growing demand. From mid-October to the end of the year the plans of 31 mining and six prospecting leases had been forwarded to Kaduna through the Assistant-Director of Surveys at Jos.

(2) *Kano Division*.—The principal duty of this Division is the Kano Revenue Survey, established in 1918 to supply the Kano Administration with accurate statements and plans as to the location, content, and soil-grading of farms in the Emirate. Its work extends to other Emirates, such as Katsina, where such work is in progress on a much smaller scale. The revenue is shared equally by the Government and the local Administration, and, as the tax varies from 6d. up to 3s. per acre, according to the land valuation, the assessment brings in large sums which, with the progress of survey, rapidly increase. The Kano Division has a staff of 40 (against eight in 1918) and an output of 60,000 acres per annum.

The cost of the Revenue Survey, excluding topography and framework, works out at 1s. per acre. The method is that of compass traverse with chain; the error of closure is put at 1/400 in linear measures; the work, which is executed by native surveyors under European supervision, is plotted on sheets at the scale of 1:2,500; and the records are bilingual, typed in Roman and Arabic script.

*General*.—The Sokoto Irrigation Survey, mainly contouring, was completed, but no figures are given. The Lithographic Section continues to function at Kano, awaiting removal to Lagos when the necessary buildings are completed. Railway surveys occupied some little time and there has been miscellaneous work in the Northern Provinces, indicative of general activity.

(f) *General Remarks*.—During the year it was decided to adopt the Clarke (1880) spheroid as the standard figure for the Colony, with the Clarke ratio of the Metre: Foot. In consultation with the Geographical Section, General Staff, of the War Office, it was

also decided to adopt the Transverse Mercator projection. To this end the Colony was divided into three meridional belts; to keep the overlap to a minimum the crossings of the bounding grid and graticule were placed on the mid-Colony parallel of 9° N.; a scale factor of 1/4,000 was introduced in each belt; and a virtual origin was chosen as common to all three belts.

There is little doubt that the Survey of Nigeria has already recovered from the disorganisation due to the war.

### Northern Rhodesia, 1925 and 1926.

Governor.—Sir Herbert James Stanley, K.C.M.G.

Director of Surveys.—Mr. W. G. Fairweather.

Examiner of Diagrams and Surveys.—Mr. L. W. G. Eccles, M.C.

#### Staff.—

Director	...	...	...	1	
Examiner of Diagrams and Surveys	...	...	...	1	
Assistant Surveyors	...	...	...	5	(1 place unfilled).
Junior Assistant Surveyors	...	...	...	2	(1 added in 1926).
Clerk	...	...	...	1	(added in 1926).
Native Clerk	...	...	...	1	
Chain Boys	...	...	...	4	
Messenger	...	...	...	1	

The unfortunate death of Mr. F. P. Ivey in December, 1925, and the appointment of Mr. Godwin Austin to be Director of Roads, leaves the survey weakened by the loss of two keen and able men whose places have not yet been filled. Three more assistant surveyors have been budgeted for but not yet appointed.

*Boundary Commission.*—The Zambesi-Congo watershed boundary between Northern Rhodesia and the Congo was in course of demarcation just before the war. Since then, further important mineral discoveries have been made in its neighbourhood and a considerable amount of development has taken place. It was considered necessary to carry out a more detailed demarcation of the sections between the marks already agreed on. A new joint Boundary Commission is therefore now at work (1927). Before it was convened the Director of Surveys sent Messrs. Godwin Austin and Turner to perambulate and report on pillars 1 to 12, a duty which was efficiently and thoroughly completed in 1925.

*Trigonometrical Work.*—Plans for some much needed triangulation to connect previous and scattered patches have been afoot for some time. Unfortunately the pressure of routine has made it impossible to carry out this project although some reconnaissance has been completed.

*Topographical Survey.*—Systematic Topographical Surveying has not yet been begun. That is no matter of wonder in view of the respective sizes of the Colony and of the survey staff.

Some of the surveys mentioned are useful additions to cartography, but scattered and independent surveys will never take the place of a consistent control and topography. There has been a good deal of air photography in the Anglo-Belgian boundary region which, with adequate horizontal and vertical control, may be a good beginning in that area.

*Special Work.*—A survey of the Katambora-Livingstone area has occupied several man-months. Some reconnaissance, accompanied by 10 miles of levelling, was carried out in connection with an Agricultural and Veterinary Experimental Station. Certain native reserve areas in North-Western districts have been delimited.

*Map Compilation and Reproduction.*—At the stage of development in which Northern Rhodesia now is there must be a continual and growing demand for maps and sketches of all sorts. Thus the reports instance the 1/M, the 4/M and the 1/4 M maps compiled in the Survey Office and either sun-printed or sent to England for reproduction. Surveys are beginning, some with conspicuous success, to undertake both drawing and printing. For numbers exceeding (say) 50, sun-printing is uneconomical and inefficient. A Vandyke outfit and both hand-press and machine are advocated.

The 1/M map of Northern Rhodesia is to be recompiled. Seven new sheets of the 4/M have been compiled and a small 1/4M has been compiled and is being printed. In this connection it is stated that the only available room for fair drawing and compilation is 20' × 20', which has to accommodate seven people. If the work is to be performed properly, each draughtsman must face his own window space with at least 8' × 6' for his own immediate labours and have additional room for the material and records he is using.

*Cadastral Work.*—In the two years under review some 380 thousand acres have been dealt with and over £7,000 has been earned in survey fees. No purpose will be served by recapitulating further the valuable and careful statistical record furnished by the reports.

*General.*—The meteorological work of the Colony hitherto carried out entirely by the Survey Department has been helped on by the appointment of a full-time observer for the local observatory. The Director of Surveys continues to be responsible however for the collection and recording of the work of outstations as well as of final compilation and the supervision of the local observatory.

The last two years have been a period of particular strain and the Department is barely keeping pace with an ever-increasing demand for its services.

**Nyasaland, 1925-1927.**

Governor.—Sir C. C. Bowring, K.C.M.G., K.B.E.

Lands Officer.—Mr. J. E. Alexander.

*Staff.*—In the last year a draughtsman seems to have been replaced by a native tracer.

The cost and work of the Department are so nearly the same as in the last Committee's report that no further details need be given. A limited amount of topographical survey is mentioned, but, if no trigonometrical control has been done, it is not likely to be of good or permanent character.

The report gives no details of the tasks which face the Department, of the methods in use, or of cadastral and financial statistics.

**Palestine, 1925-26 and 1926-27.**

INCLUDING NOTE ON THE TECHNICAL SYSTEM OF THE SURVEY OF PALESTINE, JANUARY, 1927.

High Commissioner, 1925—Rt. Hon. Sir Herbert L. Samuel, P.C., G.B.E.; 1926—Field-Marshal the Rt. Hon. Lord Plumer, G.C.B., G.C.M.G., G.C.V.O., G.B.E.; 1927—Field-Marshal the Rt. Hon. Lord Plumer, G.C.B., G.C.M.G., G.C.V.O., G.B.E.

Director of Surveys.—Lieut.-Colonel C. H. Ley, R.E. (Ret.).

**NOTE ON THE TECHNICAL SYSTEM.**

The main and ultimate object of the survey is given as the economical production of large-scale cadastral plans correctly showing each individual parcel of land as registered. But individual parcels are not yet registered and are largely undemarcated. The immediate objective then has been the production of large-scale maps in advance of settlement, to show, in plan, a sufficient number of points established on the ground to facilitate future demarcation. The ultimate (or fifth order) control is obtained on the planetable and, in the course of fixing this fifth order, topographical detail (such as *wadis*, etc.) is added. The plans are therefore called "topo-cadastral."

The control has been framed to give an ultimate fractional error of the order of  $1/1,000$ . The principal triangulation was extended from a base at Imara (south of Gaza). This base was measured originally by the survey of Palestine and later by the survey of Egypt. The probable error of this last measurement is given at the optimistic figure of  $1/2M$ . Probably the standardisation error of the original reference tape exceeds this figure.

A check base at Samakh (near the Syrian frontier) gives a poor linear check of  $1/1,200$  with the value carried through the triangulation from the Egyptian measurement of the Imara base. The original adjustment of the Principal Triangulation was, however,

rather piecemeal. The triangulation had in fact to be made use of as it grew. A new and more rigorous adjustment, in two blocks, is to be undertaken, however, and both bases are to be used. The comparatively small area to be covered has had considerable influence on methods and processes. The principal triangulation has the unusually short average side of 13 kilometres. A second order in addition would be quite unnecessary; indeed the Palestine principal is intermediate in character between first and second orders. The next step is then a third order, followed by a fourth order, and finally completed by a graphic fifth order.

The errors of this network are given as under :—

<i>Portion of Network.</i>	<i>Average Triangular Error.</i>	<i>Average Length of a Side.</i>	<i>Average Scale-error.</i>
<b>Principal</b> ...	... $\pm 1.4''$	13.20 KM.	$\pm 1/70,000$
<b>3rd Order</b> ...	... $\pm 4.9''$	4.20 KM.	$\pm 1/30,000^*$
<b>4th Order</b> ...	... $\pm 10.0''$	0.89 KM.	$\pm 1/10,000^*$
<b>Graphic</b> ...	... —	0.45 KM.	$\pm 1/1,500^*$

\* Includes errors transmitted from the higher order network.

It will be seen that third order sides are about 1/3 of the length of principal sides, fourth order about 1/5 of third order sides. Observation was regulated accordingly, and consisted of :—

Principal, 8-inch theodolite, 6 arcs. (9 in base extension).

Third order, 5-inch theodolite, 4 arcs.

Fourth order, 5-inch theodolite, 2 arcs.

(Note.—Each “ arc ” consisting of a balanced set.)

The adjustment of the principal triangulation has already been dealt with. The third order is adjusted by working two independent “ chains ” between each pair of principal points, fitting scale and azimuth to them, and values are meaned between the two chains. If there are any points left inside a triangle of adjusted chains values for them are meaned from all sides. This simple co-ordinate adjustment is perfectly sound and seems to give good results.

The fourth order is adjusted in much the same way except that a single (and not a double) chain is adjusted between each pair of points of the higher order.

The various “ controls ” described above give on the average  $5\frac{1}{2}$  points for each 1/2,500 sheet. This is not enough. The final, or fifth order, then, carried out graphically on the planetable fixes, by intersection, village boundaries, cultivation blocks, and landmarks at suitable distances.

Naturally each planetable “ fixing ” has a “ plotting ” error of about  $\frac{1}{2}$  a metre (on the ground). It is then laid down that intersected points must be at least 350 metres apart (so as to avoid outside errors of 1/500).

Tests on these points seem to confirm a general order of error of 1/1,500, which is good enough.



In close areas this graphic fifth order is replaced by traverses which tend to show differences between lengths as taped and as computed from co-ordinates of about 1/1,000.

The datum latitude, confirmed by observations at three points, differs from Egyptian values (as used during the war) by 1.4 seconds of arc. The datum longitude is, ultimately, referred to a value obtained by the Transit of Venus Expedition of 1874. A dependable direct value might be fixed with but little trouble.

The first co-ordinate system was on Cassini's Projection based on a central meridian through Jerusalem. The greatest longitudinal distance from this central meridian is about 90 kilometres and the maximum errors involved would then be about 10 seconds in azimuth and 1/12,000 both of scale and of area. It is believed that a new orthomorphic projection is in view and that the present mixture of spheroids, due to the convenience of German and American survey tables, is to be abandoned in favour of the Clarke 1880 figure.

The field costs of the methods described above are as under :—

<i>Section of Work.</i>	<i>Average Cost £E. per sq. K M.</i>	<i>Remarks.</i>
Principal Trig....	0.58	See note.
3rd Order Trig.	0.56	
4th Order Trig.	4.84	
1/2,500 <i>Topo-cadastral Mapping</i> .—		
Planetable (Open Lands)	10.00	Includes Landmarks.
Chain Survey (Close Areas)	77.00	Includes Examination.
Chain Survey (Very Close, requiring Traverse)	171.00	" "
1/500 <i>Close Town Plans</i>	913.00	" "

*Note.*—Includes base measurement, astronomical observations, reconnaissance, and cost of beacons.

The total cost of the 1/2,500 preliminary map in open village lands is therefore £E.16 per square kilometre, and in ordinary close areas £E.83 per square kilometre, on the average.

#### THE 1925-26 AND 1926-27 REPORTS.

The two reports of the Director of Surveys begin at a point when the principal triangulation, fully observed, is being readjusted.

*Control.*—104 and 109 third-order points, and 1,847 and 2,030 fourth-order points, were observed in 1925 and 1926 respectively, and many landmarks were fixed on the planetable.

#### *Large Scale Surveys.*—

*Planetabling.*—In 1925-26 80,000 dunams were completed on the 1/2,500 scale in the south of Palestine—(4 dunams = 1 acre). 103,000 dunams in the Jaffa Plain and 1,800 dunams in Cæsarea were also finished. The cost of this work was 1.25 *piastres* per dunam (or roughly one shilling per acre). 48,000 dunams of less valuable land were surveyed at 1/5,000 at a cost of 0.5 *piastres* per dunam (or fivepence per acre).

In 1926-27, 400,000 dunams and 49,000 dunams were surveyed on the 1/2,500 and 1/5,000 scales respectively at costs of 0.9 *piastres* and 0.15 *piastres* per dunam.

*Chaining*.—The survey of closer areas requires chaining. In 1925-26 74,000 dunams were so surveyed at a cost of 2.5 *piastres* per dunam (2s. 1d. per acre).

In 1926-27 a valuable orange garden area round Jaffa and Tel-Aviv consisting of 18,080 dunams was completed and plotted. The cost of this survey was 10.5 *piastres* per dunam, whilst that of some villages in south Palestine, containing 1,940 dunams, was 228 *piastres* per dunam (respectively 8s. 9d. and 190s. per acre).

1/500 plans in Guda itself, carried out in 1925, cost 83 *piastres* per dunam (roughly £3 per acre).

*Cadastral Mapping*.—Since 1922 considerable progress has been made with this work. The total is now 1,338,672 dunams (or 8,367 square miles).

*Land Settlement and Miscellaneous*.—In Beisan, lands are being surveyed, partitioned, and demarcated. The scales at which they are surveyed are 1/500, 1/1,000 and 1/2,000; the partitioning in conjunction with the Demarcation Commission is proceeding slowly, and about half the area has been completed, but how large that area is, is not stated.

Check Survey on the planetable of the Northern Boundary (with Syria) was carried out in the spring of 1926. Permanent demarcation was finished with the co-operation of French Authorities from Ras-el-Nakura to Samakh.

A map of Jaffa, covering 54 square kilometres, was made from air photographs controlled by minor triangulation and is being reproduced in Egypt.

A map of Jerusalem at the large scale of 1/2,000 in 46 sheets has been printed and issued.

#### *Recapitulation.*

To recapitulate then. The principal triangulation, completed in the field, is being readjusted. The third order is about half-finished, and the fourth order about a quarter-finished, but the coastal plain is completely controlled. The area finally completed by chain or planetable is about one-eighth of Palestine but already includes the most important areas. The standard of accuracy is adequate for the purpose and the costs are remarkably low. There is not enough information on land registry in these reports to afford much clue as to the real position of land tenure, nor are details of staff or of revenue and expenditure available.

**Sierra Leone, 1925.**

Governor.—Sir A. R. Slater, K.C.M.G., C.B.E.

Inspector-General of Surveys.—Lieut.-Colonel  
R. H. Rowe, D.S.O., M.C.

During 1925 it was decided to form a new Survey Department with the immediate objects of completing a large-scale cadastral survey of Freetown, the rapid topographic survey of the Protectorate on a scale of 1/62,500, and the establishment of a Survey School for the training of African Surveyors.

*Topographical Work.*—The personnel consists of Royal Engineer officers with African Surveyors lent by the Gold Coast Survey and is organised in five topographical field camps, one levelling camp, and one framework camp.

The Horizontal framework is being provided by astronomical latitudes and wireless longitudes on the system found successful in the Gold Coast.

The Vertical framework is being carried out by levelling based on the value for mean sea-level found by H.M.S. "Endeavour" in 1923. The closing error on a surround of 130 miles was 2.13 feet.

The work completed in about three months is :—

130 miles instrumental levels ;

95 miles compass traverse ;

6 points fixed by astronomical and wireless methods.

*Cadastral Work.*—The town survey of Freetown was begun in 1913 and closed down during the war. The original Survey was on a scale of 1/2,500. Experience on the Gold Coast has shown that 1/1,250 is a more useful scale. The work was therefore restarted, but this involved the re-observing of the old triangulation which was not accurate enough to control work at the larger scale. The surveyors, both European and African, were lent by the Gold Coast.

A check was made on a side of the topographical triangulation of the Colony carried out 20 years ago by Captain Pearson, and it was decided that that work is sufficiently accurate to be used for control of surveys in the Colony. When, however, a framework is started for the whole Protectorate it will be necessary to start afresh by measuring a new base.

It is surprising that in the last 20 years no use has been made of Captain Pearson's triangulation to control such cadastral surveys as have been made in the Colony.

*Survey School.*—The Colony is fortunate in having the old barracks of the West India regiment available for use as a Survey School. The type of candidate who presented himself at the first examination held was, however, thoroughly unsatisfactory. The

educational standard is at present apparently very low. The School, however, started work on 4th January, 1926.

*General.*—Sierra Leone is to be congratulated on the sound lines on which the Survey Department has started work.

### Sierra Leone, 1926.

Governor.—Sir A. R. Slater, K.C.M.G., C.B.E.

Director of Surveys.—Major J. Dare, M.C.

#### Staff.

<i>European</i> —					Period January to June.	October to December.
General—						
Director	...	...	...	...	1	1
Survey Officers	...	...	...	...	5	3
Cadastral—						
Civil Surveyor	...	...	...	...	1	1
Non-commissioned Officers of the Survey Companies, Royal						
Engineers	...	...	...	...	2	2
Lands Officer	...	...	...	...	1	1
Survey Instructor	...	...	...	...	1	1
<i>African</i> —						
Topographical—						
Surveyors and Draughtsmen Sur- veyors (in three grades)...	...	...	...	...	9	8
Cadastral—						
Surveyors and Clerks (First, Second, and Juniors)	...	...	...	...	4	4
Lands—						
Surveyors and Clerks	...	...	...	...	4	4
Survey School	...	...	...	...	14 under training.	

*Note.*—Many changes occurred during the year and the figures given above are no more than an indication.

#### Organization.

##### Director of Surveys.

Control Party.	Detail Parties 2 to 5.	Levelling Parties 2.	Cadastral Branch.	Lands Branch.	Survey School.
<i>Astronomically fixed points.</i>					

*Topographical Survey.*—To those who know the state of the topographical mapping of Sierra Leone in 1925 the change is little short of miraculous. By the end of July, 1927, it was hoped to have completed the mapping of about a quarter of the territory of the Colony on the one-inch scale.

*The Control*—one of astronomically fixed points—cannot be considered ideal in so far as it will be of no value for cadastral mapping in the future. It is, however, ample for topographical

purposes, and is being employed more and more in French and Italian Colonies as well as in our own. The actual methods employed are interesting but call for no special comment. We have nowhere reached finality yet, either in the choice of astronomical method or in the design and use of wireless sets. Thirty-three points were fixed, computed and beacons. Azimuths and magnetic elements were measured in each case.

The vertical control rests upon existing railway levels. 430 miles of instrumental levelling has been run from them, at a cost of £1 2s. a mile, and with errors of the order of  $\frac{3}{4}$  of an inch per mile. For minor heights aneroid barometers, Abney levels, and Indian clinometers have been used.

The detail survey appears to be mainly minor traverse work and the policy is that it shall cost not more than £2 a square mile. Names are written in the R.G.S. II System and the check upon them is ample to ensure proper care.

Finally the sheets (it is a pity to call them Field Sheets in the final map form) are sent to the Gold Coast for reproduction. Gold Coast drawing and reproduction are making great strides: names continue to improve and maps printed there are already a tribute to what can be done in training African staffs.

As regards the general policy, it is not clear that a half-inch map would not serve the purpose. Were planetabbling to be possible and were the staff sufficiently trained a considerable sum might be saved in that way. Where the survey is mainly instrumental, however, there is little to be gained in the smaller scale. A sample sheet enclosed in the report suggests open rolling country with great possibilities both for triangulation and the plane-table. Very few trees and no woods or forests are shown. Perhaps, however, they are omitted as being so general as to have escaped special mention.

*Cadastral Survey.*—The Cadastral branch was due to have finished the 1/1,250 Survey of Freetown in February, 1927. The Summary given below is an adequate explanation of method. On the conclusion of work in Freetown, outlying villages and suburbs are to be surveyed with a reduced staff, and the late Colonel Pearson's triangulation is to serve as the control. The transverse mercator is used.

*Lands Branch.*—The Lands branch, transferred to the Survey Department early in 1926, is much hampered by the lack of cadastral maps. A certain amount of business is reported.

#### *Summary.*

The following is a record of the work of 1926 :—

*Topographical Branch.*—Thirty-three points fixed by astronomical observation and wireless time signals. Azimuths observed at each point and magnetic variation determined. All points fully beacons. Computing done in the field.

Four hundred and thirty miles of instrumental levels completed.

Four thousand nine hundred and ninety miles of traverse (representing about 12 field sheets) completed, together with aneroid levels.

Six field sheets, on the scale of 1/62,500, sent to Accra for publication.

*Cadastral Branch.*—About two-thirds of the survey of Freetown, or about 1,400 acres, completed. Eighteen sheets, on the scale of 1/1,250 sent to Accra for publication.

*Lands Branch.*—

Thirteen new tenancies arranged.

Eight tenancy agreements prepared.

Ninety-three per cent. of rents for Crown lands collected.

Two claims under Public Lands Ordinance dealt with.

Eight claims in respect of other acquired lands dealt with.

*Survey School.*—Fourteen pupils trained to a sufficiently high standard as to admit of their being drafted into the field at the end of the year for elementary work and further instruction.

### **Tanganyika Territory, 1923-1926.**

Governors.—Sir H. A. Byatt, K.C.M.G. (1923-24); Sir Donald C. Cameron, K.C.M.G., K.B.E. (from September, 1924).

Surveyor-General.—Mr. R. C. Allen, C.M.G. (1923-24); Mr. J. P. Tollard (1924-25); Mr. P. E. L. Gethin, A.F.C. (recently appointed).

*Organisation.*—The staff consisted in 1926 of the following:—

Director	...	...	...	...	...	1
Assistant Director	...	...	...	...	...	1
District Surveyors	...	...	...	...	...	4
Senior Staff Surveyor	...	...	...	...	...	1
Junior Staff Surveyors	...	...	...	...	...	12
Computers: Chief, 1; Assistants, 3	...	...	...	...	...	4
Draughtsmen: Chief, 1; Assistants, 3	...	...	...	...	...	4
Superintendent and Storekeeper	...	...	...	...	...	1
Total						28

Up to 1925 a joint department was charged with Lands, Surveys, and Mines. In 1925 the three duties were separated from each other and each was placed under its own Director. The Survey Department is charged with the following tasks:—

1. *Triangulation and Topography.*
2. *Cadastral Surveys, inclusive of estates, public lands, townships, etc.*
3. *Mine Surveys.*
4. *Check and issue of plans, maps, etc.*

The Department was faced, at the outset, with the collection, interpretation, analysis, and issue of a mass of German data, which were widely scattered over sub-offices, attached to old title-deeds, and often, unfortunately, defective.

The headquarter office deals with these old plans and records, indexing and distributing the information so gained.

The Surveyor-General at headquarters is assisted by a European drawing and computing staff numbering eight. An Office Superintendent and storekeeper also appears on the headquarter staff.

Surveyors in the field (District Surveyors) are posted to definite areas, and district offices have been opened at Tanga, Moshi, Mwanza, Bukoba, Tabora, and Morogoro. It is understood that junior staff surveyors are often employed in this capacity.

*Triangulation (or Control).*—During 1923 and 1924 an Anglo-Belgian Boundary Commission surveyed the boundary between Tanganyika Territory and the Belgian Congo. Messrs. H. P. Rowe and F. M. Ford of the Survey Department acted as British Commissioners and were responsible for the triangulation and topography. The actual triangulation was of a good "Commission" order, showing triangular errors of closure of the order of five seconds. The control chain, taken in conjunction with a Belgian triangulation from the Rhodesian arc to Albertville, joins the Rhodesian and Uganda arcs. The final adjustment (by figures), including angular and linear (or base) conditions, was left in the hands of the British and Belgian home authorities and has now been completed. Final positions, azimuths, and lengths will shortly be published. During the work of the Commission about 5,400 square miles were mapped on the planetable.

In 1925 the Survey Department was unable, owing to the pressure of other work, to undertake further control, but in 1926, in the Northern and Iringa provinces, some 1,000 square miles of triangulation were completed. In the latter case a surface-taped base (p.e. about  $1/60,000$ ), length roughly 7,000 feet, was measured on Kinuva Hill, whilst latitude and azimuth were obtained astronomically and longitude with the help of a wireless receiving set.

The triangular errors reached a maximum of 8 seconds, the average being of the order of 3 seconds.

Traverses are mentioned frequently throughout the reports and a closing rule of  $1/2,000$  is mentioned. A rule like this may often be either too lenient or too severe. For the framing of a suitable rule and in the question of forms which was raised in the 1926 Report it might be helpful to consult "Survey Computations," His Majesty's Stationery Office, 1927, price 8s. net.

For astronomical determination a portable wireless receiving apparatus has been fitted up. The receiver is a Marconi Standard R.P. 4 B set and has a half second make-and-break chronometer made by M. J. Mercer, of St. Albans, with special p.m. attachment arranged locally; such a set will be of the greatest value

to the Territory. Astronomically determined points may be useful as a framework either for the topography of outlying officials or for the control of air photo mosaics.

*Topography.*—In addition to the Boundary Commission topography mentioned above, some 5,500 square miles of planetable reconnaissance were carried out in 1925, and in 1926 about 1,200 square miles at a scale of 1/100,000. Some larger scale topography (1/2,500 and 1/10,000) was also completed in 1926 round Lubembe Bay.

In almost all Colonial areas the first maps are due largely to administrative officers. It is encouraging to see that in Tanganyika these latter are encouraged to forward their sketches and surveys to the Survey Office, where they are being included in a special 1/2,000,000 map.

*Cadastral Surveys.*—Township surveys are made at the scale of 1/500. In the years 1923-24 twenty-four township plans were made and in addition a considerable portion of Dar-es-Salaam was re-surveyed on this scale. In 1925 there was an equal activity. Tanga, Moshi, Arusha, Bukoba, Kigoma, Tabora, Dodoma, Morogoro, Iringa and other towns are all to be surveyed in a programme which it is hoped to terminate in 1928.

Roughly 50,000 acres of farmstead or estate surveys have been completed per annum at a cost of about 3s. per acre. The closing errors of the traverses are all below 1 part in 2,000. So far, work has been too urgent to allow of organizing settlement surveys in large blocks. Naturally considerable economy is to be looked for, when that measure is possible, and it is probable that triangulation might replace traverse in the more open districts. Cotton markets, ginnery sites, and trading centres are included under the same heading.

*Mine Surveys.*—There is an increasing call for surveys for mining leases.

*Headquarters.*—The clerical and accounting branch is supervised by the Office Superintendent, whilst drawing and computing branches are under their own senior officials.

In the drawing office there is an increasing pressure of work in the plotting, and tracing for reproduction, of the field surveys and also of the German plans and records which are continually appearing. Thus 4,000 photo prints were made in 1926. This style of reproduction is costly in time and very inefficient where large numbers are required. A Vandyke outfit has been imported but is not yet working properly.

The computing staff was used for a variety of purposes in 1925, but in 1926 was hard pressed to keep abreast of the checking and correction of the work sent in by districts.

*Financial.*—The cost of the survey is given for each year and averages about £25,000. A survey department is rarely self-supporting because the return, indirect in nature, lies in increased development and ease of administration.



*General.*—The Survey Department of Tanganyika has already given proof of energetic and capable surveying in the Ruanda-Urundi Commission. There is, however, so much to do in the development of the Territory that it is to be hoped that no further outside calls of this nature will be honoured. The impression given by the reports is of a new department settling down well to a task which will call for both energy and technical skill. The technical routine will require careful framing.

### Trinidad and Tobago, 1925.

Governor ... .. Sir H. A. Byatt, K.C.M.G.  
 Crown Surveyor ... .. Mr. J. W. Macgillivray.

*Staff.*—A temporary computer-draughtsman and a pupil surveyor were attached to the Department.

#### *Expenditure.*—

	£
Salaries ... ..	4,630
Wages ... ..	2,246
Travelling Allowances ... ..	836
Miscellaneous ... ..	210
Total ... ..	£7,922

*Triangulation.*—Twenty-four new minor stations were fixed in St. Patrick County, with a mean triangular closure under 5 seconds.

*Control Traverses.*—Seventy-two miles of traverses, primary and secondary, were run along roads, rivers and boundaries as part of the Colony framework. These framework traverses are run between tertiary trigonometrical stations, fixed about 2 miles apart. The primary traverses are executed with a 300-link rustless steel chain, compared with standard steel tape, and aligned by a 6-inch Vernier theodolite. The permissible linear error is 1/3,000 and the average of the 16 traverses completed has been 1/6,450. On the secondary traverses the maximum error allowable is 1/1,500; of the 31 completed the average error has been 1/3,880. Each station is marked with a galvanised pipe and concrete pillars are built at every  $\frac{1}{4}$  mile both on primary and secondary traverses.

*Cadastral Work.*—The field work of the year is set out in the following table :—

	<i>Petition Surveys.</i>		<i>Concession Surveys.</i>		<i>Reserves, Resumptions and Resurveys.</i>		<i>Controlling Traverses.</i>
	Chains.	Acres.	Chains.	Acres.	Chains.	Acres.	Chains.
Staff ... ..	11,098	1,799	—	—	1,965	785	5,649
Contract ... ..	7,712	1,294	4,440	5,095	761	367	97

*Plans.*—1,805 grant, lease, and survey plans of land transactions were made and 572 plans checked and certified under the Real Property Ordinance. Twelve new and 32 revised sectional maps were issued. Six of the new sheets on the scale 1/2,500 were drawn for reproduction by the Vandyke process.

*Miscellaneous.*—A table showing diurnal variation of magnetic declination in the Island was prepared for the use of surveyors, and solar observations were taken once a week to control the standard clock used for maintaining Island time.

### Trinidad and Tobago, 1926.

Governor.—Sir H. A. Byatt, K.C.M.G.  
Crown Surveyor.—Mr. J. W. Macgillivray.

*Staff.*—The computer-draughtsman retired and a pupil surveyor was attached to the Department.

#### *Expenditure.*—

Personal Emoluments—						£
Salaries	...	...	...	...	...	4,507
Wages	...	...	...	...	...	2,390
Other Charges—						
Travelling	...	...	...	...	...	759
Miscellaneous	...	...	...	...	...	249
Contingencies	...	...	...	...	...	15
Total						£7,920

*Triangulation.*—Six new minor trigonometrical stations were established in the counties of Victoria and St. Patrick; average error of triangular closure 10 seconds; maximum, 14 seconds. In future the maximum permissible error will be 10 seconds.

#### *Controlling Surveys.*—

	<i>Petition Surveys.</i>	<i>Concession Surveys.</i>	<i>Reserves Resumptions and Resurveys.</i>	<i>Controlling Traverses.</i>	<i>Petition Surveys.</i>	<i>Concession Surveys.</i>	<i>Reserves, &amp;c.</i>
	Chains	Chains	Chains	Chains	Acres	Acres	Acres
Staff ...	11,936	—	2,102	4,159	1,604	—	1,208
Contract	8,498	709	2,077	22	1,177	—	998
Totals	20,434	709	4,179	4,181	2,781	—	2,206

Primary, secondary, and tertiary traverses showed average closures of 1/4,600, 1/2,900, and 1/1,700, respectively.

*General*.—The work of the Department appears to be progressing on lines now soundly established. The cadastral plans are being plotted on the new series of 1/2,500 sheets of the Colony grid, and necessary detail can be transferred with ease to the topographical series on the scale of 1/50,000. The first pulls of the topographical sheets will be used as basic maps for the incorporation of cadastral detail and will thus form a small-scale cadastral series, for which the detail in general is taken from the older sectional maps on the scale of 1/9,504 and which will be reproduced by the Vandyke process.

*Topographical Survey*.—Officer-in-charge, Captain G. Latham, R.E.

The whole of Trinidad and Tobago has now been surveyed topographically, in greater part as a result of the work of a Colonial Survey Section.

The sheets of the series, numbering nine on a scale of 1/50,000, have been reproduced in colour by the Ordnance Survey.

### **Uganda, 1925 and 1926.**

Governor—Sir W. F. Gowers, C.M.G.

Director of Surveys, Land Officer, and Commissioner of Mines.—  
Mr. Dyson Blair.

Deputy Director of Surveys.—Mr. H. B. Thomas.

Assistant Land Officer.—Mr. J. G. Strickland.

Conveyancer and Registrar of Titles.—Mr. D. L. G. Williams.

#### *Staff.*—

15 Surveyors.

1 Chief Draughtsman.

1 Computer.

1 Office Superintendent and Storekeeper.

1 Assistant Draughtsman.

4 European Clerks.

2 Indian Draughtsmen.

3 Goan Clerks (one added in 1926).

*Trigonometrical Survey*.—*Base Measurement*.—In 1925 a base was measured in the District of Teso. The Geographical Section. General Staff, lent the invar tapes and the outfit was completed by the purchase of index tripods and tension weights. Curiously enough, these weights were found to be inaccurate, averaging 10.164 Kgms. instead of the 10 Kgms. specified. The final length of 19,906.7065 feet is subject to a probable error of  $\pm 3/5$  of an inch or one part in 395,117. The estimation of this error starts,

however, by taking into account the one part in a million of the N.P.L. standardisation, and due allowance is made for all other subsequent and possible sources of error. The description of measurement, the tables published in the 1925 Report, and the careful analysis of error are sufficient evidence of the development of this survey from a geodetic point of view.

*Primary Extensions to the Arc.*—In the 1926 Report a diagram shows the longitudinal chain which starts from the Uganda Arc and reaches the eastern frontier, joining the Anglo-German boundary triangulation on the side Seavona-Misoma.

The average triangular misclosure of 68 fully observed triangles is  $\pm 2''.849$ —which is too high to come into first order classification. Considering the comparatively small distance between bases, however, it is probable that this chain will be as permanent in character as it will be useful. Some further analysis of the base and recomputation may reduce the linear misclosure (1/12,672).

The last lap of this chain, from the new base to the old Anglo-German Boundary Triangulation, gives a poor linear check (of 1/8,580), but shows that had the new base not been measured a fairly close agreement both in azimuth and in scale could have been got between the Uganda Arc and the Boundary Triangulation; this agreement must be regarded as fortuitous: the Boundary Commission triangulation was not of the first order and cannot be regarded as definitive.

Another longitudinal chain (the Ankole chain) of 14 fully and three partially observed triangles between the Uganda Arc and the old Uganda triangulation side—Kankamba-Kuangaro—was observed in 1925 and computed in 1926. The scale of the old Uganda work was found too small, but that fact has been known for some time. This Ankole chain is of the same order as the eastern chain mentioned above. No details are given of the theodolites employed: it looks as if they were hardly up to the work expected of them.

*New Values for the Arc.*—Since the 1926 Report was written the positions of the Arc have been redetermined by the Geographical Section, General Staff, in the light of Professor Dehalu's astronomical results, and advanced copies have been sent to Uganda. A statement of the changes involved in all surrounding triangulations is on the point of going to press.

*Main Circuit Traverses.*—31 and 49 miles of main traverse were completed in 1925 and 1926 respectively. A very creditable closure of 1/5,000 is reported in 1925. It would be interesting to know the conditions of closure which are laid down by the Department.

*Topographical Survey.*—1926 sees the completion of the 1/50,000 survey of Toro and Ankole. The actual completion of the minor

orders of triangulation simultaneously with topography is probably an excellent arrangement. It is seldom realised that the link between the two is so strong that both are bound to profit from a common leadership.

Some 1,300 square miles have been completed in both respects by two surveyors.

*Cadastral Surveys.*—The cadastral survey of the estates guaranteed under the Uganda Agreement of 1900 has made good progress in five counties of Buganda. Based on trigonometrical and traverse control, carried out simultaneously, this survey is now passing into areas of sparse population and scanty labour. The output for the two years is about 320,000 acres and the total area covered since the commencement in 1904 is 9,379 square miles or about 56 per cent. of Buganda. In the course of this survey, native surveyors, now under training, were found of assistance.

Another cadastral survey, at 1/10,000, based on properly controlled planetable traverses, is being made of native estates in Toro. Simultaneously with this survey, scattered patches of triangulation, antedating the general trigonometrical control, were picked up and properly "placed." Two surveyors, and part time of a third, were employed. Two hundred and forty-three square miles out of a total of 376 have now been demarcated.

Surveys of various sorts were carried out on Crown land. Trading and township plot surveys reach a yearly total of nearly 1,000, agricultural and miscellaneous of nearly 9,000 acres. In 1926 no less than 822 cotton market plots and 28 ginnery sites were surveyed.

*Maps.*—The very large number of sunprints issued is evidence of the need of Uganda, as of other East African Colonies, for a good system of reproduction. Eventually, and without question, the example of the Gold Coast and Nigeria will have to be followed and a lithographic establishment installed. Meanwhile the Fort Portal 1/250,000 sheet N.A.36.S. and part of N.A.35X have been completely fair drawn in Uganda and the War Office is undertaking publication.

*The Lands Office.*—1925 was a year of great activity and unexpected revenue. In the townships and in agricultural areas (with the exception of Buganda) land is practically entirely in the hands of the Government. Leases play an important part in the revenue therefore, and, although they are kept low, are subject to periodical increases as development proceeds. Survey fee receipts were exceptionally heavy in 1925, but fell off in 1926 because the accumulation of arrears in the Buganda *mailo* estates had been cleared off by then.

The number of final certificates of ownership for native estates in Buganda was: in 1924, 915; 1925, 279; 1926, 261; whilst

2,156 provisional certificates were endorsed in 1925 and 1,276 in 1926.

There appears to be a healthy and growing demand for land among the natives which seems likely to end in a population of free peasant proprietors.

Dealings in Crown lands have been mainly in regard to building plots in townships, trading centres, and cotton markets, but in 1926 a demand for coffee land developed in Toro.

The routine work of the administration of Crown properties grows steadily. Thus in 1926 over 2,000 Crown leases were current.

*Conveyancing.*—Conveyancing shows the same tendency to expand as does the rest of the Department. The table given below is taken from the 1927 Report. The apparent decrease in 1926 is due to the fact that many fees for work done in 1926 were credited to 1925.

		1921.	1922.	1923.	1924.	1925.	1926.
<b>Grants of Freehold—</b>							
Township ...	...	—	1	1	—	1	—
Agricultural ...	...	4	—	9	4	4	5
Ginneries, etc. ...	...	—	—	—	—	2	2
Missions ...	...	—	—	—	—	—	96
<b>Leases—</b>							
Township ...	...	57	26	24	148	213	283
Agricultural ...	...	3	5	9	21	6	12
Ginneries, etc. ...	...	8	11	26	7	56	13
Cotton plots ...	...	—	—	—	—	387	205
Miscellaneous ...	...	—	—	—	—	—	3
		72	43	69	180	669	619
<b>Leases cancelled—</b>							
By forfeiture ...	...	2	20	86	23	—	1
By surrender ...	...	17	11	11	22	8	16
By grant of freehold ...	...	5	1	5	3	—	4
		24	32	102	48	8	21
<b>Conveyancing Fees...</b>	...	£691	£760	£811	£1,578	£3,303	£1,948

*Mines.*—As regards mining, the prospect for tin in the Ankole and Kigezi regions seems good and negotiations in the several oil mining companies are proceeding.

The revenue from mining licences amounted to over £1,300 in 1926.

*Office of Titles.*—The Torrens system of land registration is gaining in popular esteem. The reports show the native tendency to unofficial dealing, speculation, and transfer of land, but the present increase in registration fees indicates that the value of secure and legal tenure is penetrating the native mind.

*Revenue and Expenditure.*—The following tables speak for themselves :—

## 1. REVENUE.

<i>Heads of Revenue.</i>	<i>Actual Receipts,</i> 1925.			<i>Actual Receipts,</i> 1926.		
	£	Shs.	Cts.	£	Shs.	Cts.
No. 3. Fees, etc.—						
Endorsements and Copies of Provisional Certificates.	222	10	00	181	16	00
Land and Survey Fees (Uganda Agreement).	2,499	17	43	1,172	14	40
Land and Survey Fees (Other)...	3,712	0	91	1,975	7	58
Preparation of Deeds ...	3,303	10	00	1,947	18	86
Registration of Titles Fees ...	2,314	6	00	2,061	6	00
Sale of Printed Maps ...	245	14	00	491	7	90
Sale of Township Markstones ...	146	2	00	205	7	00
No. 5. Rents of Government Property.—						
Land Rents ...	20,990	11	91	19,380	11	68
Salt Deposits ...	62	10	00	125	0	00
Water Rights ...	34	4	00	18	1	58
No. 9. Land Sales.—						
Sales of Land ...	—	4	00	1,711	0	25
Premiums on Leases ...	510	0	00	2,670	18	33
No. 2. Licences, etc.—						
Prospectors' Licences ...	283	6	00	1,357	10	00
	<u>£34,324</u>	<u>16</u>	<u>25</u>	<u>£33,298</u>	<u>19</u>	<u>58</u>

## 2. EXPENDITURE.

	<i>Actual Expenditure,</i> 1925.			<i>Actual Expenditure,</i> 1926.		
	£	Shs.	Cts.	£	Shs.	Cts.
No 27. Land Survey Department.						
Personal Emoluments ...	21,038	5	74	19,033	12	72
Other Charges ...	5,381	15	06	4,575	5	50
	<u>£26,420</u>	<u>0</u>	<u>80</u>	<u>£23,608</u>	<u>18</u>	<u>22</u>

The yearly reports from Uganda are admirably drawn up documents.

## ANNEX.

*The following is an analysis by the Colonial Survey Committee of the reports of the Survey Department of the Anglo-Egyptian Sudan for the years 1925 and 1926 :—*

**Anglo-Egyptian Sudan, 1925.**

Governor-General.—Sir G. F. Archer, K.C.M.G.

Director of Surveys.—Mr. A. A. R. Boyce, C.B.E., F.R.A.S.

*Staff.*—Two Surveyors and the Chief Clerk retired, one Inspector was promoted Chief Town Surveyor, three new Inspectors of Survey, Grade III, were appointed, and the office of Chief Clerk filled by promotion. Four draughtsmen have been added to the topographical staff.

*Expenditure.*—

	£E.	£E.
Personal Emoluments—I	... 21,715	
II	... 1,430.	
	<hr/>	23,145
Other Charges.—		
Transport	... 2,510	
Travelling Allowances	... 950	
Forage and Climate Allowances	... 605	
Upkeep of Motors	... 328	
Guides and Labourers	... 1,100	
Office and Stores, etc.	... 265	
Stationery	... 946	
Postal and Telephones	... 162	
Upkeep—Gezira Beacons	... 220	
Credit for Managil	... 400	
Contingencies	... 100	
	<hr/>	7,586
Total (1925)	... ..	£E30,731
„ (1924)	... ..	£E29,452
		<hr/>

*Organisation.*—The Department is organized in four Sections : A. Topographical ; B. Cadastral ; C. Drawing ; D. Mapping and Printing.

*A. Topographical Section.*—The excellent positional work in the Bahr-el-Ghazal was continued, resulting in the fixing of 11 longitude and 32 latitude stations. Wheel and compass traversing was run for 570 miles, the area covered being approximately 6,700 square miles.

In the small triangulation from Khartoum northwards towards Gedarif 70 stations were fixed in an area of 6,750 square miles.



Planetabling of the Argo District, Dongola, and wheel compass sketches from Shendi to Abu Deleig via Um Shedida and Geleita completed the field work of this Section.

*Route Sketches.*—Numerous sketches, etc., were received, including work in the Dinga and Nuer countries, in a large area lying between the Bahr-el-Gebel and the Bahr-el-Naam; on the Ibba River and the Abyssinian frontier; in the southern part of the Mongalla Province, etc.

*B. Cadastral Surveys.*—7,160 boundary stones were set up and their positions fixed in five months by a small party working on the Geteina Riverland Revision Settlement. Various small surveys, including a Pumping area, Sewage Farm, and Cotton area, were executed.

On the Gezira Irrigation Scheme, plans affected by Escape Channels were surveyed and areas computed. A survey was made of the new railway stations at Marangan and Fogara; compensation plots were demarcated at Makwar; about 2 kilometres at Cannabia Takarin,  $\frac{1}{2}$  kilom. of the Shalloha Canal, and 6 kilometres of railway diversion near Wad-el-Haddad were traversed.

In the Blue Nile Province 770 plots of the Sennar Rainland Scheme and 32 plots in Rufaa were measured up and a survey made of Government land near Wad Rawa in the Kamlin District. 1,135 beacons were repaired in the Gezira.

In Halfa Province the whole of the *seluka* land of Wadi Halfa and Sukkot was remeasured.

*Town Surveys.*—Steady progress has been made with the resurvey of Omdurman; over 2,500 petitions for alignments, subdivisions, and title deed plans have been received. The plans of Khartoum, Khartoum North, Abu Hamed, Athara, Berber, El Damer, Shendi, Suakin, Tokar, Sinkat, Gebeit, Kassala, Wadi Halfa, Wad Medani (where many plots and alignments were surveyed), and other places have been kept up to date. The towns of El Obeid and Bara were resurveyed and new surveys made in some villages and at Wau.

*Levelling and Contouring.*—This work in the Sudan is undertaken for an end mainly cadastral. In the Gezira, 80,000 feddan were completed; at Tokar 25,000 feddan; at Khor Abu Habi, 37,000; at Kassala on the Gash, 126,000 feddan.

*C. Drawing Section.*—This section appears to include those engaged on adjustment of the control. The triangulations in the Red Sea and Kassala Provinces have been adjusted to the fixings of the Egyptian Survey; an old discordance of 24 seconds in longitude was thus reduced to 0.7 second. No account of method or origins is given. The adjustment of topographical triangulation, which is generally discontinuous, is mainly graphical.

It is proposed to carry on with this scheme by going carefully through the old records. It may be said at once that, without a

general territorial control, consisting of well-measured and well-balanced triangulation, with primary traverses of high accuracy where the nature of the country inhibits triangulation, the scheme, though eminently desirable in itself, will do little towards placing the survey of the Sudan on a permanent foundation.

The drawing output has been : 28 revised sheets on 4/M scale, three new sheets of the 1/M; two index maps; 33 special and 54 town maps.

*D. Mapping Section.*—18,500 maps were printed and 16,000 issued during the year—an increase of nearly 50 per cent. on the preceding year. A new flat-bed power-printing machine has been installed by the Sudanese staff.

*Miscellaneous.*—The examinations for native assistants showed disappointing results, the passes being 12 per cent. only of the entrants. A training school was run in the Red Sea Hills during the summer, for which a Manual in English and Arabic has been prepared.

*Remarks.*—The reports are regarded mainly as a record of work, which is of a more varied description than is usual in a British Colony; as such they are complete and prepared with care. Their failings lie in the absence of technical information, such as description of methods, accuracy sought and obtained, and the like, and of general tabulation of cost rates, without which the efficiency of the survey must remain somewhat obscure; systematic statistics of progress, accuracy, and costs per unit are the best guides a Survey Department can possess as to the success of its own labours. These reports, furthermore, are too diffuse: it is difficult in many instances to be assured that work assigned to a provincial heading, for example, has not been summarised elsewhere.

### Anglo-Egyptian Sudan, 1926.

Governor-General.—Sir G. F. Archer, K.C.M.G.

Director of Surveys.—Mr. A. A. R. Boyce, C.B.E., F.R.A.S.

#### *Expenditure and Revenue.*—

	£E		£E
Personal Emoluments ...	24,864	Increase	1,549
Other Charges ...	8,921	,,	1,762
Total ...	£E33,785	Increase	£E3,311

Travelling, transport, and labour involve heavy expense in this great expanse of country.

The revenue is made up of Survey Fees, £E464; sale of Cadastral and Topographical Maps, £1,350; total, £1,814, of which £E824 was charged to Departments.

*Staff.*—Three members of the European staff (including the Director) had retired by the end of the year and three appointments were made. In the native staff there was a single change.

*Trigonometrical and Topographical Surveys.*—1,200 square miles of Minor Triangulation were covered in the southern part of Mongalla Province. A topographical survey of the country around the proposed new Administrative centre at Juba was executed and a detailed hydrographical survey was made of the White Nile from Rejaf to Juba.

*Cadastral work.*—850,000 feddan were surveyed for land settlement in the Mergaz of Menagil (1 feddan = 1.04 acres), involving 1,208 planetable sheets on the scale of 1/4,000; a general map of the area was drawn on the scale of 1/150,000.

The Geteina River, Rawa, and the Berber Land Settlement schemes have entailed a considerable volume of work. Survey and demarcation have followed the construction of the Makwar dam. The proposed Jebel Aulia dam has given rise to the need for more accurate survey, which is in course of execution.

*Town Surveys.*—To keep the plans of towns up to date is part of the annual routine. The towns of Roseiris and Tendeli were resurveyed.

*Gezira Contour Survey.*—A big effort was made in the Gezira in 1926, 907,000 feddan, or 1,474 square miles, being levelled and contoured at  $\frac{1}{2}$ -metre intervals, each map showing 300 spot levels. The total area completed is 1,919,000 feddan, approaching one-half of the whole Mesopotamian area. The cost appears to be kept down to a very moderate limit,  $1\frac{1}{2}d.$  to  $2d.$  per acre, with a tendency to decrease, partly by reason of the substitution of motor for camel transport. A rigorous survey of the canal system has been instituted.

*Drawing.*—Plans of Wau were drawn on the scale of 1/5,000. Twenty-six maps of the 4/M series and two of the 1/M series were redrawn. One of the 1/2 M maps was drawn for reproduction by the War Office. Drawing work, all now executed by Indian and Sudanese draughtsmen, has increased four-fold since 1922.

*Mapping.*—37 special maps and 427 sun-prints and tracings were supplied to various public bodies. 16,000 maps were printed; 1,170 sold for cash realised £238. A new zinc graining machine was made locally for £E.43 and the colour printing, begun in 1925, was continued successfully.

*School.*—The Summer School at Sinkat does not appear to reveal much aptitude on the part of the pupils, but one notes that individual native assistants in the Department receive much commendation.

*Remarks.*—The retiring Director states that the growth of development in the Sudan is now so rapid that the present staff is inadequate to cope with the increased demand for work in the field.

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## ANNUAL GENERAL REPORT FOR 1927.

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# NIGERIA.

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## ANNUAL GENERAL REPORT FOR 1927.

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### HISTORY AND GEOGRAPHY.

The Colony and Protectorate of Nigeria is situated on the northern shores of the Gulf of Guinea. It is bounded on the west and north by French territory and on the east by the former German Colony of the Cameroons. Great Britain has recently received a mandate over a small portion of the Cameroons (31,150 square miles) which, for purposes of administration, has been placed under the Nigerian Government. The remainder of the Cameroons is administered by the French under a mandate, so that, for practical purposes, all the land frontiers of Nigeria march with French territory.

2. The area of Nigeria, including the mandated area of the Cameroons, is approximately 373,078 square miles (Southern Provinces and Colony 91,139 square miles; Northern Provinces 281,939 square miles) and it is thus larger than any British Dependency other than Tanganyika, India and the self-governing Dominions. It is more than three times the size of the United Kingdom. Along the entire coast-line runs a belt, from 10 to 60 miles in width, of dense mangrove forest and swamp, intersected by the branches of the Niger delta and other rivers, which are connected one with another by innumerable creeks, the whole constituting a continuous inland waterway from beyond the western boundary of Nigeria almost to the Cameroons. Behind this belt lie dense tropical forests, rich in oil-palm trees and valuable mahoganies. Further inland the forests become thinner and are succeeded by open ground covered with long grass and occasional clumps of trees. In the extreme north, where there is a very small rainfall and little vegetation, the desert is slowly but steadily encroaching. There are few mountains in the southern portion of Nigeria except along the eastern boundary, but north and east of the junction of the rivers Niger and Benue there is a large plateau from 2,000 to 6,000 feet in height. The country is well watered by rivers, especially in the south. Besides the Niger and Benue, which during the rainy season are navigable by steamers as far as Jebba and Yola respectively, there are a number of important rivers of which the Cross River is the largest. Except for Lake Chad, on the extreme north-east frontier, there are no large lakes.

3. The population of Nigeria according to the latest returns is 18,765,790\* Southern Provinces and Colony, 8,532,856; Northern Provinces, 10,232,834, larger than that of any British

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\* Includes population of the mandated area of the Cameroons.

Dependency except India. There are about 4,000 Europeans temporarily resident in Nigeria, chiefly in the employ of the Government, and of mercantile and mining companies. The country is not suited for European settlement. Of the native inhabitants the greater number are of pure negro race, but in the north there are Berber and negroid tribes. Of the former the Yorubas, Ibos and Benis are the most important, and of the latter the Fulani, the Kanuri and the Hausa-speaking tribes, generally called Hausas. The Yorubas occupy the south-west corner of Nigeria and from an early date possessed an organised government. The Benis are now a comparatively small tribe, but Benin was formerly a very powerful kingdom and its influence extended over a considerable area. The Ibos are a large unorganised tribe who occupy most of the land east of the lower Niger. The Kanuri occupy Bornu, in the north-east of Nigeria, a kingdom which has survived for many centuries in spite of great vicissitudes. It was known to the Portuguese as early as the 15th century and to Arab geographers several centuries earlier. The Hausas occupy the greater portion of northern Nigeria and from an early date had attained to a fairly high level of civilisation. At the beginning of the 19th century the Hausa States were conquered by the Fulani, a nomad people who had settled in the towns and country of Hausaland and who, by their superior intelligence, had acquired great power and influence. The existing Hausa system of law and administration based on the Koran was retained, but Fulani dynasties were established in various states.

4. The coast of Nigeria first became known to Europe towards the end of the 15th century as the result of the visits of Portuguese explorers. Shortly afterwards the demand for negro labour in the American and West Indian colonies created an immense trade in slaves and for over three hundred years the west coast of Africa was visited in large numbers by the slave ships of all nations. At the beginning of the 19th century efforts were made to suppress the traffic, which was declared illegal, and a British naval squadron was stationed on the Coast to intercept the slave ships. With the decline of the slave trade the traffic in palm oil and other tropical products rapidly increased, and the visits of naval ships and later, of the British Consul at Fernando Po gave to the British a considerable prestige and influence among the tribes inhabiting the coast of Nigeria. In 1851 British support was given to an exiled King of Lagos, who, in return, pledged himself to abolish the slave trade in Lagos, which was at that time, the chief slave market in West Africa. Finding himself powerless against the slave-dealing faction, his son ceded Lagos to the British in 1861 and the British Colony of Lagos came into being the following year.

5. By the exertions of Mungo Park (1796-1805), Captain Clapperton (1822-26), Richard Lander (1826-30), Doctor Barth (1850-55) and numerous other explorers, most of whom lost their lives in the country, the course of the Niger and the existence of the Fulani kingdoms in the interior became known, and an attempt was made by Mr. Macgregor Laird and others to open up the interior to trade. In spite of the efforts of these pioneers, who were supported to a certain extent by the British Government and philanthropists, eager to strangle the slave

trade by legitimate traffic, the early efforts were not successful, owing to the heavy mortality among the European crews of vessels ascending the river. A better knowledge of conditions, and the use of quinine as a prophylactic against malaria, made later operations more successful and before 1860 trade was established along the banks of the Rivers Niger and Benue. In 1879 the various British firms trading on these rivers were amalgamated, and in 1887 a Charter was granted to the amalgamated companies, which became known as the Royal Niger Company, Chartered and Limited. By this Charter the Company became responsible for the government of the river basins and the whole of Hausaland and Bornu, but, in practice, its influence extended little beyond the banks of the rivers.

6. The Berlin Conference of 1885 had recognised the British claim to a protectorate over Nigeria and that part of the country which was not included within the Lagos territories of the sphere of the Chartered Company was made into a separate administration under Foreign Office control and became known as the Oil Rivers Protectorate and later as the Niger Coast Protectorate.

7. Owing to the restrictions on trade caused by artificial boundaries and the virtual monopoly which the Niger Company exercised, to the inability of the Company's forces to restrain the slave-raiding propensities of the Fulani Chiefs, and to foreign aggression on the western frontiers, it became necessary for the British Government to assume a more direct control over the country. The Company's Charter was accordingly revoked on the 1st January, 1900, and the northern portion of their territories became the Northern Nigeria Protectorate; the southern portion was added to the Niger Coast Protectorate and the whole was renamed the Protectorate of Southern Nigeria. Both the Northern and Southern Protectorates were placed under Colonial Office control.

8. In 1898 an Imperial Force, recruited locally, but with British Officers, was raised by Sir Frederick Lugard, and was later taken over by the Colonial Government. This force was named the West African Frontier Force and the armed constabularies of the other West African Colonies and Protectorates were modelled on it. Soon after the establishment of the Northern Nigeria Protectorate, these troops were used to subdue the Muhammadan rulers of the Hausa states and Bornu who had persistently ignored the British requests for the cessation of slave-raiding and whose attitude was one of open hostility to an administration of whose power they had had no proof. As each in turn was conquered a new ruler was appointed who undertook to govern his country according to local law and tradition, but without slave-raiding and the extortion and inhuman cruelties which had marked the former régime. British Residents were stationed throughout the country and exercised a wholesome check on any tendency to relapse.

9. In the south there were fewer large states and the people on the whole were of a much lower standard of intelligence and development. On the lower reaches of the Benue River, a Jekri chief, named Nana, defied the Protectorate Government and dealt openly in slaves. He was attacked by a naval and military force and defeated in 1894 after severe fighting. In 1897 a peaceful mission to the King of Benin was massacred and

another combined expedition was despatched: Benin was captured and was found to be full of the remains of human sacrifices, for which the City had long had an unpleasant reputation. In 1902 the Aro tribe was subdued.

10. While the remainder of the country was being opened up, the hinterland of Lagos was being added by cession to the territories originally ceded by the King of Lagos in 1861. In 1866 Lagos had been included in the West African Settlements and in 1874 it was united with the Gold Coast Colony. It became the separate Colony and Protectorate of Lagos in 1886.

11. In 1906 Lagos and Southern Nigeria were amalgamated and in 1914 Northern Nigeria was included and the whole country became the Colony and Protectorate of Nigeria.

12. On the outbreak of war in 1914 the Nigeria Regiment (of the West African Frontier Force) took part in the campaign which resulted in the conquest of the neighbouring German Colony of the Cameroons and a strong contingent of the Regiment also fought in the East African Campaign. On the whole the loyalty of the chiefs and people of Nigeria throughout the war was very marked, but there was a somewhat serious rising in Egbaland in 1918 which was quickly subdued.

13. The principal languages spoken are, in the Northern Provinces, Hausa, Fulani, and Arabic; and in the Southern Provinces, Yoruba, Efik, Ibo, and Ibibio.

14. The currency is controlled by the West African Currency Board which was constituted in November, 1912, to provide for the currency of the British West African Colonies and Protectorates. The coins current are:—United Kingdom gold, silver, and bronze; West African silver and alloy coins of the values of two shillings, one shilling, sixpence and threepence; and Nigerian nickel-bronze coins of the values of one penny, one halfpenny and one-tenth of a penny. United Kingdom notes are legal tender; and West African notes of one pound and ten shillings are also current. The United Kingdom coins are being gradually superseded by the West African and Nigerian coinage.

15. The weights and measures used in Nigeria are the same as those used in Great Britain.

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## 1.—GENERAL OBSERVATIONS.

16. The main political divisions of Nigeria are the Colony of Nigeria, and two groups of Provinces, known as the Northern and Southern Provinces, which together form the Protectorate. The whole country is under the control of a Governor and Commander-in-Chief to whom the Lieutenant-Governors of the Northern and Southern Provinces and the Administrator of the Colony are responsible. The Governor is assisted by an Executive Council consisting of a few of the senior officials. By Order in Council dated the 21st of November, 1922, and entitled the Nigeria (Legislative Council) Order in Council, 1922, the former bodies known as the Nigerian Council and the Legislative Council were abolished and a larger and more representative Legislative Council was substituted for them. This new Legislative Council

consists of:—The Governor, as President; twenty-six Official Members; three elected Unofficial Members representing the municipal area of Lagos and one representing the municipal area of Calabar; and not more than fifteen nominated Unofficial Members. These fifteen are selected to include nominees of the Chambers of Commerce of Lagos, Port Harcourt, Calabar and Kano, of the local Chamber of Mines, and of the Banking and Shipping interests, together with members representing African interests in parts of the Colony and the Southern Provinces of the Protectorate which do not return elected representatives to the Legislative Council. This Council legislates only for the Colony and the Southern Provinces of the Protectorate and the Governor continues to legislate for the Northern Provinces of the Protectorate. The power of taxation in the Northern Provinces is left with the Governor and the scope of the Legislative Council in financial affairs is confined to the Colony and Southern Provinces, except that the sanction of the Council is required for all expenditure out of the funds and revenues of the Central Government which is incurred in the Northern Provinces. There is thus a measure of direct representation of the people by members elected by themselves to the Legislative Council.

17. The first elections for the unofficial members for Lagos and Calabar were held on the 20th of September, 1923, and aroused the keenest interest. The new Legislative Council was inaugurated by the Governor on the 31st of October, 1923.

18. The Protectorate (including the mandated territory of the Cameroons) is divided into twenty-two provinces, each under the immediate control of a Resident.

19. In the Northern Provinces the efficiency and co-operation of the leading Emirs—which have been noted in the reports for recent years—have been well maintained. The desire on their part for administrative progress and economic development continues; keenness to learn of things outside their own provinces is evinced. This is instanced by a visit, proposed by the Emir himself, of the Emir of Kano to Lagos in March. The Emir of Kazaure was of the party. The visit was successful and greatly appreciated by the interested visitors.

20. The re-organisation of provinces and re-distribution of administrative areas—mentioned in the 1926 report—have been found successful.

21. His Excellency toured in the Northern Provinces in February and March of the year, visiting Kano, where, at a brilliant ceremony, he installed Abdullahi as Emir of Kano. Zaria and Kaduna also were visited. While in the Zaria Province His Excellency inspected the British Cotton Growing Association Seed Farms and Ginnery. A tour of the Northern Provinces was made by the Officer Administering the Government in June when the Kano, Plateau, Bauchi, Bornu and Zaria Provinces were visited.

22. There have been no changes in the Political administration of the Northern Provinces throughout the year under review. In pursuance of the policy that a Conference of Residents should be held yearly, a successful conference was held in Kaduna in September; many important questions of administration were discussed.

23. Serious disturbances in the Northern Provinces have been few. A patrol was necessary in the Yangedde district in the Idoma Division of Benue Province. The operations of the patrol lasted for approximately one month and were carried out without any loss of life or firing.

24. During the year re-organisation of the procedure in regard to mining applications has taken place. Much of the routine previously done in the Northern Provinces Secretariat is now carried out in a separate office in Jos. The result is successful and the mining community now obtain their various mining titles with the least possible delay. The present tendency among substantial mining companies is to instal machinery on a large scale which has increased the demand for coal from Udi. Hydro-electric power schemes are also being experimented with by sundry companies.

25. In Sokoto in 1926 it was found that more cotton seed than was required was distributed; there has, therefore, been a considerable reduction in the amount distributed this year. The prospects of the season are, however, very good and it is probable that farmers will receive an enhanced price. The export for the year 1926-27 was disappointing. A new pioneer ginnery is being erected at Moriki in the Sokoto Province to tap the cotton-growing areas north of Gusau and a modern type one at Talata Mafara in the same province.

26. Famine conditions in the provinces of Kano, Zaria, Adamawa and Benue caused some distress in the early part of the year and food prices became greatly inflated. Credit is due to the Native Administrations concerned that they were able to alleviate matters with their own staff, arrangements and funds.

27. The strong financial position of the Native Treasuries as previously reported, was maintained in 1926-27. The balances carried forward on the 1st April, 1927, including sums invested in securities (£501,458) amounted to £1,324,744. The aggregate revenue exceeded that of the previous year by £19,303. In making this comparison, however, it is necessary to take cognisance of the fact of the adventitious receipt in 1925-26 of £26,267 as profits on the sale and re-investment of securities. An increase in expenditure is accounted for by appropriations for road and transport developments which were specially marked during the year.

28. The Shalla Irrigation Scheme in the Sokoto Province has led to the re-claiming of about 300 acres. This can be extended up to a total of 800 to 1,000 acres if required.

29. There have been no serious outbreaks of epidemic diseases during the year. Smallpox occurred in the provinces of Sokoto, Adamawa and Plateau during the spring and while for a short time fatal cases were numerous, the severity of the disease soon abated. The tsetse fly investigation work at Sherifuri continues.

30. Rinderpest has taken its usual toll among cattle, the most notable outbreak occurring in the Sokoto Province. The laboratory at Vom continues to maintain its successful anti-rinderpest campaign, and the amount of serum cultured and issued during the year exceeds that of last year. Fulani cattle owners evince the greatest keenness to have their cattle treated and travel long distances to this end. A new immunization



camp established at Dindima in the Bauchi Province has met with great success and others are being opened in the same Province.

31. An outstanding event of interest during the year was the aeroplane flight conducted by the Royal Air Force from Cairo to Northern Nigeria. In the course of this flight Maiduguri, Kano, Sokoto, Kaduna, Jos and Bauchi were visited. Emirs and local chiefs were given opportunities of inspecting the machines.

32. The following important chiefs have died during the year:—Achamanu, the Aku of Wukari; Abubakr, the Emir of Wushishi.

33. The following chiefs have been installed: Abudullahi, the Emir of Kano, by His Excellency the Governor; the Emir of Agaie, by His Honour the Lieutenant-Governor, Northern Provinces, and Mohamadou, the Emir of Jemaa.

34. Relations with the French have been excellent. An incident on the frontier emphasised these good relations and strengthened the spirit of co-operation. This incident was a raid on the French post of Tessawa by natives mainly resident on the Katsina border. Unhappily the raiders killed French officials including one European. The leader of the raiders and some of his accomplices were killed; as to those who escaped, prompt search by the Native Administration Authorities resulted in the capture in Bornu of one of the chief offenders, and made it difficult for other offenders to find sanctuary in Northern Nigeria. A route march in conjunction with the French authorities took place in October from Katsina along the French border to Gumel and back. During the march, visits were exchanged with French officers and native chiefs on the frontier.

35. A final agreement has been come to with the French Administrator of Garua, fixing the last remaining details of the frontier in that section, and leaving little to be settled elsewhere.

36. In the Southern Provinces preparations have been made for the introduction of taxation into the hitherto-untaxed provinces. In October the revenue from Native Courts was released by Government to form the nucleus of a Native Administration Fund in each Division of those provinces.

37. The office of the Administrator of the Colony was separated from that of Lieutenant-Governor, Southern Provinces, as from the 20th October.

38. Direct taxation was introduced into the Asaba Division of the Benin Province on the 1st April, 1927.

39. A serious outbreak of disease among the cattle of the Benin Province broke out in August and was stamped out by the end of September.

40. In November a successful Exhibition was held in Calabar. The Exhibition was open for one week, exhibits from fifteen provinces were displayed and a representative display of Native Arts and Crafts was exhibited.

41. The Preventive Service of the Eastern Frontier in the Cameroons Province was taken over in January by a special force of police and three new Customs revenue offices have been opened.

42. Semi-permanent native hospitals are in course of construction at Bamenda, Mamfe and Kumba.

43. In March the Arbitrators award in the matter of the Ijebu-Ibadan boundary was announced.

44. In May the Full Court refused leave to appeal from the judgment of the court below which was in favour of the Bale of Ejirin and which denied the claim of the Awujale of Ijebu Ode to certain rights over the Ejirin Market.

45. Marked success has attended the measures taken to combat plague in the Ijebu Province.

46. Mining operations have been continued in the neighbourhood of Ameka in the Abakaliki Division of the Ogoja Province. Approximately 200 tons of silver-bearing galena and 190 tons of zinc ore have been won during the year.

47. A telegraph line from Akure to Ondo was opened during the year.

48. At Enugu in the Onitsha Province a new European hospital has been completed and work has been commenced on the buildings required in connection with the transfer of the Headquarters of the Southern Provinces to that town.

49. The local chiefs accepted the offer of compensation and rent for the Diobu land at Port Harcourt and signed a deed leasing the land to Government.

50. Work on the Port Harcourt water supply was completed in May.

51. A motor road with concrete bridges and culverts from Shaki to Eruwa Road in the Oyo Province has been completed.

52. An African hospital with modern appliances and fittings, built by the Native Administration, was opened at Ibadan in December.

53. In August an anti-tax agitation sprang up in the Warri Province. Overt acts of lawlessness occurred in the Warri and Kwale Divisions. On the 30th September a turbulent demonstration against the Officer Administering the Government ended in a riot in which the police were forced to fire on the crowd. The Warri Province was declared a Proclaimed District under the Peace Preservation Ordinance by a Proclamation dated the 30th November. By the end of the year the ringleaders of the agitation had been brought to trial, conditions in the province became normal and the Proclamation of the 30th November was cancelled on the 29th December.

## II.—FINANCE.

54. The revenue and expenditure for the past five years are as follows:—

	True Revenue.	True Expenditure.	Expenditure on Loan Works.
	£	£	£
1922-23 ...	5,505,465	5,410,983	2,157,650
1923-24 ...	6,260,561	5,501,242	1,900,170
1924-25 ...	6,944,220	5,768,715	1,375,210
1925-26 ...	8,268,928	6,583,167	1,183,728
1926-27 ...	7,734,429	7,584,692	1,016,162

55. The revenue and expenditure for the six months April to September, 1927, amounted to £2,896,960, and £3,242,892 respectively. Included in the expenditure is £14,704 advanced for Loan Works (New Programme) to be subsequently recovered from Loan Funds. From figures recently estimated it is anticipated that the revenue for the current year will fall short of the 1926-27 figures by approximately £1,850,000 while the anticipated expenditure figure shows a decrease of approximately £1,200,000 on the figure of the last financial year. These reductions are due in a large measure to the procedure adopted for the first time in 1927-28 in dealing with the Railway revenue and expenditure, the gross figures of which are now excluded from the Revenue and Expenditure Estimates and the net deficit, or profit, only being shown.

56. The excess of assets over liabilities at 31st March, 1927, was £6,063,228. To this should be added £11,110 advanced from revenue for Loan Works (New Programme) and recoverable from a future Loan, making a true surplus of £6,074,338 on 31st March, 1927. The Public Debt at 31st March, 1927, was £23,559,209 and the accumulated Sinking Fund amounted to £1,410,272.

57. The various Native Administrations have their own Estimates of Revenue and Expenditure, deriving their revenue principally from a proportion of Direct Taxes (varying from fifty *per cent.* to seventy *per cent.*)

58. The Surplus Funds of the Native Administrations are no longer deposited with the Government at interest. Most of the Native Administrations of the Southern Provinces have their surplus funds invested locally with the banks but those of the Northern Provinces are to a large extent invested through the Crown Agents. These investments no longer appear in the Colony's Balance Sheet.

59. Silver coin to the value of £241,339 was withdrawn from circulation during the year ending March 31st, 1927, and £283,484 was shipped to the United Kingdom to be melted down. The alloy coin in circulation on the same date was about £5,713,000 and the total currency exclusive of notes in circulation at 31st March, 1927, was estimated at £6,724,000.

### III.—PRODUCTION.

60. *Agriculture.*—As a result of the extraordinarily big cotton crop in the United States of America last year the world's prices for cotton, palm oil, palm kernels and groundnuts continued to fall during the first half of 1927. But as soon as a small American cotton and cotton seed production in the current year began to be anticipated, the price of all export products steadied, and in August they began definitely to rise, and are now again at a fairly satisfactory level. The price of of cocoa, although tending to fall during the year, is still very high.

61. The annual variations in the quantity of palm oil and palm kernels exported from Nigeria seem to depend almost entirely on the price offered by the local buyers. And apart from occasional changes in sea freights, the local price follows the world price very consistently. Following the course of prices, exports in

the early part of the year were relatively less than those in corresponding periods in recent years; but immediately the price began to rise the export trade responded very promptly; and so far as can be estimated at present there is every reason to expect that the exports for the year will nearly equal those of last year.

62. The proper statistical year for cocoa exports is from October 1st to September 30th. The export of cocoa in 1926-27 from Nigeria, excluding the Cameroons, amounts to 42,300 tons as compared with 38,300 tons in 1925-26, 36,700 tons in 1924-25 and 32,300 in each of the two seasons before that. So far as can be judged the underlying annual rate of increase in production, due to young trees coming into bearing, is at present about 1,500 tons per annum.

But in any given year this increase may be exceeded or negated by annual fluctuations. In view of the relatively very dry weather experienced in the Southern Provinces in the current season, a crop rather smaller than that of last year is anticipated.

63. In the present main cocoa belt in the western part of the Southern Provinces, cocoa planting continues steadily, but does not seem to have been accelerated by the recent high price. The high price has, however, greatly helped the efforts of the Agricultural Department to stimulate cocoa planting in other parts of the Southern Provinces. In the Ondo Province there has been a continuation of the increased planting that was mentioned in the last annual general report (paragraph 76). It would be misleading to say that there has been much planting in any other province; but there is at least a distinctly different frame of mind noticeable among the farmers in regard to cocoa in several districts, which will probably lead to visible results before very long.

64. The efforts of the Department of Agriculture to improve the quality of Nigerian cocoa, through a dual programme of produce inspection and co-operative demonstrations of fermenting, have been described in previous reports. This work continues to give good results. The current season has only just opened; but all buyers agree that the quality this year is a marked advance on anything that has ever been seen before in Nigeria. The weather has been favourable for quality; but in the past, whatever the weather might be like, whenever the price was high, the quality was bad. The high price of the last two years, on the contrary, has been accompanied by a steady improvement in quality. Estimates of the average relative increase in the value of Nigerian cocoa that has occurred in the last three years vary from the Department of Agriculture's conservative estimate of £1 10s. per ton, to figures as high as £3 or £3 10s. per ton, that have been put forward by some of the merchants who trade in this commodity. There is still room for yet further improvement; and there is every reason to expect it. The special grade cocoa produced at the co-operative demonstration fermentaries continues to command a high premium. Indeed it even seems to tend gradually to increase; for, whereas £5 per ton premium was regarded as quite satisfactory a year or two ago, now a premium of £7 per ton over the highest local price for "F.A." is quite common.

65. The export of groundnuts in the season 1926-27 (October 1st to September 30th) amounted to only 90,000 tons as against 115,000 tons in 1925-26 and 132,000 in 1924-25. As indicated in last year's report the reason for this was mainly the low price offered. The average prices during recent buying seasons (October to March inclusive) have been as follows:—

					£	s.	d.
1924-25	...	...	...	...	13	4	6
1925-26	...	...	...	...	10	15	0
1926-27	...	...	...	...	11	19	0

But the price in the earlier and more important part of the 1926-27 season was barely £10. Undoubtedly the small export last season must be partly ascribed to the nuts having been eaten locally because of the shortage of other foods. A tentative estimate of the export in the current season (1927-8) is 90,000 or 100,000 tons. There seems to have been an expansion of planting in the area in the east of the Sokoto Province, where the effect of the road is beginning to show itself, in opening up trade. That is the area that the new branch railway will tap. This increase is however believed to be offset by less intensive planting in the older parts of the groundnut belt, as a result of an increased planting of grain crops for food. The yield per acre of groundnuts this year seems to be satisfactory. Given normal weather in 1928, there seems every reason to anticipate an increased production in 1928-29.

66. The situation of American cotton production in the Northern Provinces is very similar. The export in 1926-27 amounted only to a little over 16,000 bales as against nearly 37,000 in the preceding season. This is partly ascribable to the weather, and partly to the fact that there was an increase of local consumption and also of export by land, owing to the low price that the exporters to Europe could offer. Plantings in the current season have been restricted by the exceptionally heavy planting of grain crops, so that although the yield per acre promises to be normal, the export in the current season is tentatively estimated at only 28,000 bales. However the farmers do not seem to have lost confidence in cotton growing. The building of the new railway has had an important effect, even although it was only partly opened last year and that only to Funtua. The remission of railway freight, and the reductions of sea freight and ginning charges that were thereby secured, all helped. These measures increased the local price of seed cotton by a farthing per lb., which was a very important amount at distant places where, out of the price of 1½d. which was actually offered at the railway stations, ¾d. was absorbed by transport: in such places, a farthing per lb. meant a great deal. This, however, was not all, for there is no doubt but that these measures being given a wide publicity among the farmers through the medium of a speech delivered by His Excellency at Funtua, had a not inconsiderable moral effect.

67. These recent experiences provide an exceptionally good opportunity for judging the prospects for the new railway, and there is nothing in them to cast doubt on the increased production of groundnuts and cotton which it was predicted that the railway would cause, whenever it should be constructed and opened.

68. The production of native cotton for export in the "middle" and Southern Provinces amounted approximately to the same quantity of 11,000 bales, at which it has stood for the last three years. Any increase in this production awaits an improvement in quality. Such an improvement is now in sight. Last year (1926-27) the work of the Agriculture Department in this subject had reached the stage that certain strains of improved indigenous cotton had been brought to a state approaching purity, through several years of continuous self-fertilisation and scientific selection by modern methods. Two "sister" strains had been found, in two years' tests, to be reliably good yielders, and rather more resistant to some diseases than the ordinary native cotton. Both of these were multiplied to the extent of five acres in 1926-27. The lint from those ten acres was valued, in a considerable series of examinations by different brokers etc., at 2½d., to 3d., per lb., over either middling American or the ordinary native cotton; and the valuations have been confirmed by scientific examinations at two English Cotton Research Institutes. The high price at which its lint is valued, together with its high ginning percentage, causes the seed cotton of these strains to be worth ½d. or 1d. per lb. more than the native cotton. (Last year ordinary native seed cotton fetched 1d. per lb., only). It was therefore decided that this year these two strains should be multiplied as much as possible. The seed sufficed to sow, by a special method, some 1,330 acres on native farmers' fields; to obtain this area 1,310 fields belonging to 814 different individuals were used. The crops have proved quite satisfactory in spite of the fact that the season has been so exceptionally dry. The growers seem entirely satisfied that the cotton promises to yield rather better than their ordinary native cotton. This area should now produce enough seed to permit the supply of seed to anyone in the Oyo and Abeokuta Provinces who wants it; it is hoped that there will be a quite considerable production of this cotton in 1928-9.

69. It was stated in the last Annual General Report that the food crops in the Northern Provinces promised to be distinctly below average; and it was indicated that, though an actual famine was not anticipated, yet some shortage must be expected for several months. This forecast proved to be accurate: the conditions were certainly not such as is conveyed by the word "famine", but there was a definite shortage which caused the price of grain to soar to three or four times the normal price. It would have risen higher in the town but for the sale of imported rice in some quantity by the Native Administrations at cost price. A trade in native foodstuffs sprang up between the Southern and Northern Provinces, which also helped. Fortunately the current season has been as favourable as the last one was unfavourable; and food in the Northern Provinces is now exceptionally plentiful and cheap.

70. In the Southern Provinces an exceptionally light rainfall this year has caused exceptionally light food crops; but in the Southern Provinces "an exceptionally light food crop" means only that the gross production is a little less than in a good year: it does not mean any serious shortage.

71. *Forestry*.—The area of Forest Reserves has been increased by 903 square miles, making a total of 7,940 square miles. In addition there are areas aggregating 5,497 square miles which have been selected for reservation and are awaiting either settlement, preliminary, or final proclamation.

72. The work of surveying these areas proceeds slowly on account of the unfilled vacancies in the staff. Two of the recently-appointed officers have taken a special course in survey at the Imperial Forestry Institute and it is anticipated that better progress will result in 1928.

73. Planting for the supply of timber and pit props continues; the total area now planted exceeds 3,200 acres. At Akilla, the existing plantations have been increased during 1927 by 108 acres, the species planted being all indigenous, *viz.*, mahogany, opepe, sida and abura. The results shown at this plantation are very gratifying and a very valuable estate is being built up.

74. The export trade in mahogany has been dull. A considerable number of defective logs have been shipped for which there is a poor demand, whilst good quality logs have found a steady market.

75. There is an increasing demand for secondary timbers, the chief among which is opepe which is being used in the plywood trade.

76. The licences for timber concessions now amount to 101 whilst applications for new concessions are also being dealt with.

77. Owing to the low price of rubber, few applications have been received for permits to tap indigenous species but there has been an increase in the output of the plantation product.

78. The planting of fuel plantations adjacent to a large towns is attracting interest and those already in existence are beginning to justify the expenditure incurred on them, and supply a much-needed want. Twenty acres of the Ibadan plantations were cut over during the year and the crop was all sold for house poles and fuel at good prices. In addition 77 acres of this plantation were re-stocked.

79. Good reports have been received from the Northern and Eastern Provinces on the results of the planting of wattle and eucalyptus.

80. Seeds of *Hydnocarpus Wightiana* were planted in various nurseries and satisfactory results are reported in respect to their growth. The most promising appear to be at Sapoba where 2½ acres have been planted out and are flourishing.

81. The great importance of this tree is that it produces a valuable oil which has been used successfully in the cure of leprosy.

82. Many enquiries have been received concerning the supply of gum—large quantities of which are to be found in the Northern Provinces, but chiefly in the Bornu Province. An officer of the Forestry Department is proceeding to the Soudan, which has been the principal source of the supply of gum arabic, with a view to ascertaining the methods used in collecting, grading and marketing the produce. It is hoped that the knowledge so obtained, together with improvement in transport facilities in the provinces concerned, will enable a very considerable industry to be built up in Nigeria.

83. During the year two officers of the department completed a special course of study in silviculture, which included a tour in India, and returned to Nigeria in September. In addition, appointments have been sanctioned for three other specialist officers in the subjects of Forest Engineering, Forest Utilisation and Wood Seasoning and Preservation. The services of such officers should prove to be of great value in developing the forest resources of the country many of which have hardly been touched up to the present by either the local or the export trades in such products.

84. During the year two European officers have been appointed to the charge of the Botanic Gardens at Victoria and great improvements have already taken place in their management. The reports that it is proposed to issue from time to time on the various exotic and indigenous economic plants that are being cultivated there should prove of great interest to the planters and others concerned with such matters.

85. *Mining*.—There has been great activity in tin mining during the year, the output of concentrate (containing seventy *per cent.* metal) amounting to over 11,000 tons, being a substantial increase over that for 1926. This is all the more satisfactory, in that it shows that the recent setback in the price of tin has had no appreciable effect on the production.

86. The reduction in the price of Udi coal following the completion of the Eastern Railway has resulted, as anticipated, not only in a marked increase in the use of labour-saving machinery, but also in the conversion of several plants from oil to coal, as for example the electric generating station at Ropp.

87. The enterprising lead given by the Keffi Consolidated Tin Company, Limited, who were responsible for the introduction of the first steam-shovel into Nigeria, has been followed by others, and it is of interest to note that one such shovel erected by the Nigerian Base Metals Corporation, Limited is the largest of its kind and is capable of removing overburden at a remarkable rate. Drag line excavators are also being utilised on ground suitable for their purpose.

88. Satisfactory progress is being made with the construction of the dam and canal in connection with the Kura Falls Power Scheme, which will be a valuable asset to the minesfield on its completion. A large dam has also been erected during the year by the Northern Nigeria (Bauchi) Tin Mines, Limited, on a tributary of the N'Gell River, in order to augment the supply of water for the Kwall Falls Power Scheme, thus lengthening the period wherein cheap electric power is available for mining purposes on the property of that company.

89. As an indication of the expansion of the tin mining industry, it may be noted that in spite of the continued introduction of machinery, the coloured labour employed is over 5,000 more than that recorded for the previous year, and even so the demand would appear to be in excess of the supply.

90. With regard to minerals other than cassiterite there is little to record, for the output of gold is at present negligible, and there is little likelihood of an increase unless new deposits are discovered.

91. Lead mining is also in a somewhat stagnant condition, the output of galena for the year being only about 300 tons,



two-thirds of which was obtained from the Ameka Mine near Abakaliki in the Southern Provinces, while the balance was won at Zurak in Adamawa Province. Other deposits of galena are known to occur at various places on the Benue, such as Arafu and Akwana, but in view of the serious fall in the price of lead, their exploitation on a large scale is hardly likely to be attempted until the transport facilities have been greatly improved.

92. Early in the year, the Mines office was removed from Naraguta to Jos, where it is now incorporated in one building with those of the Administrative, Survey and Treasury Departments. As a result, a change in procedure has been made in respect to applications for mining titles; those for areas within the Plateau Province being now made direct to the Resident, instead of to the Chief Inspector of Mines, while the priority plan, which used to be kept up to date by the Mines Department, has now been taken over by the Survey Department.

93. The decentralisation of the Mines Department, which had been under consideration for some time, was sanctioned towards the end of the year. This step, which had become imperative owing to the rapid expansion of the mining industry, involves an increase in the staff of the Department from seven to ten and the dividing of the minesfield into four main divisions for purposes of inspection and administration.

94. The death rate as the result of mining accidents amounts to 0.6 per thousand, thus showing a gratifying decrease as compared with that for 1926, though the latter, it should be mentioned, was above the normal. It is hoped that when the more effective supervision resulting from the decentralisation of the Mines Department has had time to make itself felt, there will be a still further reduction in fatal mining accidents.

95. *Annual Exports.*—The export trade relies mainly upon certain staple articles all of which are of great value, and represent the main sources of the wealth of the country. They are shown in the return hereunder in which the quantity and value exported during the last five years are compared:—

Palm Oil.				Palm Kernels.	
	Quantity Tons.	Value £		Quantity. Tons	Value. £
1923 ...	99,439	2,982,488		223,171	3,740,852
1924 ...	127,083	3,944,340		252,847	4,461,482
1925 ...	128,113	4,166,096		272,925	4,937,450
1926 ...	113,267	3,616,159		249,100	4,440,452
1927 ...	113,305	3,617,332		256,967	4,574,191

Ground Nuts.			Cocoa.	
	Quantity. Tons.	Value. £	Quantity. Tons.	Value. £
1923	22,887	403,059	32,821	922,298
1924	78,266	1,461,448	37,204	980,402
1925	127,226	2,394,251	44,705	1,483,764
1926	126,799	2,342,739	39,099	1,366,016
1927	90,772	1,633,896	39,152	1,968,612

	Cotton Lint.		Tin.	
	Quantity. Cwts.	Value. £	Quantity. Tons.	Value. £
1923	62,701	396,549	8,475	1,190,313
1924	92,770	762,427	8,852	1,548,040
1925	132,724	797,463	9,293	1,737,578
1926	179,315	1,182,050	10,562	2,217,046
1927	101,854	611,124	10,926	2,403,720

96. It will be seen that both palm oil and palm kernels reached a high point in tonnage and value and although not quite as satisfactory as in 1924 and 1925 the quantities were substantially above the average for the last six or seven years. The market was generally speaking not favourable, prices offered for the former article ranging between £20 and £22 per ton, while those for the latter were in the neighbourhood of £14. Cocoa showed very little increase on the previous year in spite of uniformly good prices. Groundnuts showed a falling off of over 36,000 tons as compared with last year. For this there are two reasons the first being that prices were so low that the producer beyond a certain distance from the markets found it an unprofitable proposition owing to the heavy cost of animal transport, and the second that owing to a general shortage of local foodstuffs a fairly large proportion of the crop passed into local consumption. Cotton lint showed a somewhat disappointing fall, which can be attributed to much the same causes, but in the figures for tin ore there is a record which gives an indication of the flourishing state of this industry. In the trade in hides and skins, improved methods of preparation have resulted in greatly increased prices and the extent of the trade can be gathered from the following comparative table:—

	1925.	1926.	1927.
Cattle hides lb. ... ..	7,294,903	6,257,089	8,326,075
Sheep Skins .. ...	260,422	605,426	637,818
Goat Skins .. ...	3,043,392	3,628,248	3,206,836

#### IV.—TRADE AND COMMERCE.

97. *Trade.*—The total value of the trade of Nigeria (including specie) during the year was as follows:—

	£
Import ... ..	15,341,000
Export ... ..	16,312,000
	<hr/>
	£31,653,000

an increase of seven hundred and sixteen thousand pounds sterling on the trade of the previous year. The value of the transit trade (*i.e.*, goods passing through the inland waters of Nigeria to and from French territory) was slightly over £19,000 a decrease of over £600.

98. Commercial imports, excluding specie, were valued at £12,352,000 an increase of over five *per cent.* compared with the previous year, while commercial exports at £15,647,000

showed a slight decrease. Imports of specie amounted to £1,195,000 compared with £836,000 in the previous year, whereas exports at £657,000, were approximately the same as in 1926.

99. The United Kingdom accounted for 53.5 *per cent.* of the total trade compared with 53.7 *per cent.* for the previous year, imports at sixty-two *per cent.* showing a decline of 1.1 *per cent.* and exports at 45.6 *per cent.* a decline of 22.2 *per cent.* The United States of America with ten *per cent.* of the trade showed an increase of 28.2 *per cent.* but Germany with 15.5 *per cent.* showed a decrease of .03 *per cent.* With the exception of the colonies in British West Africa there is no trade with any part of the British Empire except through the United Kingdom and to a small extent with Canada through the United States of America.

100. From the figures given in the following return it will be seen that the import trade was maintained at a high level, and fell short only by a comparatively small sum of the value for 1925 which at that time was considered more than usually large. On the other hand, the value of the export trade though not by any means unsatisfactory did not reach the point touched in the two previous years, but as a whole the figures can, however, be taken to indicate steady progress and a genuine return after various disappointments to settled commerce.

Commercial and Government.	1922.	1923.	1924.	1925.	1926.	1927.
Imports (exclusive of Specie) ...	10,303,688	10,271,066	10,948,309	14,783,209	12,761,129	14,146,489
Exports (exclusive of Specie) ...	8,936,302	10,885,136	14,460,930	16,962,995	16,681,310	15,654,656
Totals ...	19,239,990	21,156,202	25,409,239	31,746,204	29,442,439	29,801,145
Imports of Specie ...	603,647	1,490,786	1,973,028	1,495,140	836,351	1,194,585
Exports of Specie ...	1,514,209	819,876	577,147	407,166	658,308	657,717
Totals ...	2,117,856	2,310,662	2,550,175	1,902,306	1,494,659	1,852,275
Gross Totals ...	21,357,846	23,466,864	27,959,414	33,648,510	30,937,098	31,653,420

1927. Parcels by Parcel Post not included.

101. The principal articles of the import trade are cigarettes, cotton piece goods, kerosene, kola nuts, petrol, provisions, salt, spirits (gin), tobacco unmanufactured, and the statistics for the last five years shows steady expansion. The consumption of cigarettes has now reached a point which it might almost be thought cannot be exceeded and yet there is no doubt that it will increase by twenty-five *per cent.* within the next few years. It would not have been unreasonable to assume that the cigarette habit would have affected adversely the trade in leaf tobacco, but the quantity of the latter article imported last year was well above the average and cannot but be considered to point to a state of general prosperity. The same may be said of another luxury article, gin, which in spite of the almost prohibitive rate of duty shows importations above the average. Of the other main articles of imports, it will cause no surprise to find that petrol supplies exceeded three million gallons—by far the highest quantity yet imported in a year—and there is little doubt but that this figure will be considered more or less insignificant in ten years time. Imported provisions remained about the same as in the two previous years, but cotton piece goods almost reached the 1925 level, while the importation of salt showed substantial increase and the trade in kola nuts improved. With regard to the sources of these supplies cigarettes, cotton piece goods and salt come from the United Kingdom. Provisions also come chiefly from the United Kingdom but practically all of the salt fish comes from Germany and Norway and the trade in this commodity is a large and growing one. Kerosene, petrol and tobacco unmanufactured come from the United States of America, kola nuts from the Gold Coast Colony and spirits (gin) from Holland chiefly. There seems to be no reason why British Empire fish should not compete with the countries mentioned above for the local market in dried and salted fish, and there should be an opening for more trade in British motor cars, etc., but in this respect British companies have improved their position considerably during the last few years.

102. Approximately fifty *per cent.* of the palm oil exported went to the United Kingdom, twenty-five *per cent.* to the United States of America, ten *per cent.* to Italy and the remainder divided between Germany, France, Holland and Belgium. With regard to palm kernels almost all went to the United Kingdom and Germany, each taking about fifty *per cent.* and forty-five *per cent.* respectively. In pre-war years Germany took something like seventy-five *per cent.* of the kernels exported and each year since 1920 she has taken a larger percentage. All of the tin ore and over ninety-five *per cent.* of the cotton went to the United Kingdom. The hides and skins were taken by the United Kingdom and France in about equal proportions and roughly twenty *per cent.* of the total was distributed between Germany, United States of America, Belgium, Italy and Holland. The cocoa was divided between the United Kingdom, United States of America, Holland and Germany, about thirty *per cent.* going to United States of America, and sixty *per cent.* almost evenly divided between the others. About sixty *per cent.* of the groundnuts went to Germany, twenty *per cent.* to France, ten *per cent.* to the

United Kingdom and the balance to Holland, Belgium, Italy and Spain.

## V.—COMMUNICATIONS.

103. *Harbours, Creeks and Rivers.*—Navigable conditions on Lagos Bar and in the entrance channels remained satisfactory and showed little change during the year under review. The official draught of twenty-five feet was maintained throughout but no instance occurred of any vessel taking advantage of this draught. The usual maintenance work on the moles was carried out by the Harbour Works Department and the West Training Bank was extended by ninety feet. *The Lady Clifford* has been employed dredging on the Eastern Spit, and in the Commodore, Bruce and Pool Channels as circumstances required, though her efforts were concentrated on the Spit when weather conditions were favourable. Only very slight changes have taken place in the contour of the Eastern Spit, the seawards end of which remains practically unchanged. Inside the harbour, dredging operations were carried out by the *Sandgrouse*, *Child*, *Queen Mary*, *Mole* and *Whitworth*, the latter being a pontoon grab dredger acquired during the year from Messrs. Armstrong Whitworth and Company. As a result of these operations, the draught at the Custom's Wharf and at Nos. 1, 2 and 3 buoy berths was increased to twenty-four feet and the depth at the downstream berths at the Ijora or Iddo coal wharf, where considerable silting had occurred, was increased to eighteen feet, *i.e.*, the authorised draught. The resultant spoil has been utilised in connection with the various reclamation schemes in progress during the year, *i.e.*, the Ebute Metta-Apapa railway track, the Alakoro embayment, at Apapa dockyard behind Nos. 2 and 3 berths, and on the site of the Harbour Engineer's new Depot between Apapa and Ebute Metta. The spoil *ex The Lady Clifford* was dumped at sea with the exception of a small proportion discharged into barges and pumped ashore *ex Romulus*. Part of the spoil *ex Queen Mary* was dumped up Badagry Creek as it was unsuitable for reclamation purposes. This is an unsatisfactory procedure but unavoidable under the conditions prevailing.

104. At Port Harcourt, the second instalment of ocean wharfage was completed and handed over on August 1st. The new wharf is 870 feet long with an upstream extension of 105 feet suitable for small craft. It is anticipated that the first portion of the new coaling berth will be ready by about March of 1928, but the electric power required for this installation will not be available before the end of the year.

105. The usual quarterly surveys of Lagos Bar and Entrance have been carried out and plotted in conjunction with those made by the Harbour Engineer's Department, soundings for the latter being taken between the moles only. A survey of the ocean steamer route from Rawson Creek near Forcados to Sapele was made during the year, thus completing the surveys of steamer routes between Forcados and Burutu, Warri, Koko and Sapele. The Admiralty are producing a new chart of this area

from the information supplied to them. A minor survey of Onya Crossing on the Niger was carried out in the interests of inland water shipping. This crossing is near the junction of the Forcados and Nun branches of the River.

106. An exceptionally large waterway programme has been dealt with during the year. The launch routes from Lagos to Sapele and throughout the Delta have been cleared and kept open to navigation. Clearing parties have also been employed at various periods of the year on the following waterways:—

Creeks in the Sudd Region.

The Niger River and its tributaries.

The Omerun, Anambra, N'doni and Kiaghodo Creeks.

The Warri-Koko Creek route and the Koko Canal.

The Ogba Creek.

Bubara Rapids on the middle Niger.

Imo and Azumini Rivers.

Qua Ibo, Enyong, Bansara and Cross Rivers.

Mungo and Meme Rivers in the Cameroons Province.

Inspections have also been carried out of the Oshun, Yemoji and Ibu Rivers in order to estimate the possibilities of clearing these rivers at a later date.

107. The coastal buoys and those marking navigable channels in the harbours and estuaries were efficiently maintained throughout the year, no instance having occurred of any buoy being reported as out of position. The Calabar Light Buoy was extinguished for a few days owing to a mechanical defect, and the Bonny Light Buoy was fouled and damaged by the Spanish steamer *Teresa Taya* on October 7th. It was temporarily re-lighted by the *Pathfinder* two days later and replaced by a new buoy on October 15th. There are now sixty-seven buoys and fourteen beacons maintained by the Marine Department as aids to navigation besides the three long-range light buoys.

108. The lights on the coast including those in the British Cameroons were well maintained and the lighthouses kept in good repair. The new automatic light installed at Cape Nachtigal during the year has proved of great assistance to mariners. A similar installation for Cape Debundscha is shortly expected from England and should be operating early next year.

109. Mail and transport services were maintained regularly by Government craft on the following routes:—

Lagos to Sapele and Forcados.

Port Harcourt to Opobo.

Port Harcourt to Degema and Brass.

The Baro-Lokoja-Onitsha service was taken over by the Niger Company during the year. The low water service on the Cross River between Itu and Ikom run in connection with Messrs. Elder Dempster and Company's service has run satisfactorily. A second ferry steamer for the Lagos-Apapa ferry service arrived out in June and has proved of great value as a relief vessel. The transport of coal for Government Departments from Port Harcourt to Lagos and to the outstations, Forcados, Calabar and Victoria was maintained satisfactorily throughout the year.

110. *Shipping*.—Regular mail, passenger and cargo services were maintained throughout the year between the United King-

dom and Nigerian ports, and also between Continental and American ports and Nigeria. Messrs. Elder Dempster and Company, Limited, hold the bulk of the shipping, but many other firms run regular services, amongst them being the American West Africa Line, John Holt and Company, Limited, African and Eastern Trade Corporation Limited, Holland West Africa Line, Woermann Linie and allied Companies, Chargeurs Reunis French Steamship Line, Frassiniet Fabre Line, Roma Societa di Navigazione, and Italian West Africa (Congo) Line—Navigazione Libera Triestina. The total tonnage of cargo landed and shipped was 1,215,000 as compared with 1,189,000 last year. The number of vessels which entered and cleared was 1,473 as against 1,240 in 1926.

111. *Railways*.—The railway is divided into two routes. The western, with its terminus at Apapa and Iddo, comprises a main line from Lagos (Apapa and Iddo Stations) to Kano, a distance of 705 miles from the coast, through the important towns of Abeokuta (served by Lafenwa station on the main line), Ibadan, Ilorin, Oshogbo, Minna, Kaduna, Zaria; a branch line connects Zaria with Jos which is the junction for the line from Port Harcourt. The gauge of the Zaria-Jos branch is two feet six inches, that of the remainder of the line three feet six inches. Baro on the Niger River is served by a line (111 miles) branching from the main line at Minna, and forms a port for import and export traffic. The eastern route, running from Port Harcourt on the Bonny Estuary, effects a junction with the western line at Kaduna a distance of 566 miles from Port Harcourt. From Kafanchan a connecting line runs to Jos, an important centre in connection with the Tin Mining Industry. Jos, the centre of the industry, is now brought within 521 miles of the coast at Port Harcourt as compared with a distance of 751 miles *via* Zaria to Lagos. The immediate result of the opening of this route has been to reduce the price of coal delivered at Bukuru from Enugu to forty shillings and five pence per ton against eighty-nine shillings *via* Zaria and the Bauchi light railway and also to effect large reductions in the rail freight on tin, machinery, provisions, etc. The Up Boat Express now works through to Jos *via* Kaduna and Kafanchan, a distance of 740 miles as compared with the old route of 751 miles, the time occupied being reduced by two and a half hours. Enugu station, which serves the coal fields, is situated 151 miles from Port Harcourt.

112. A broad gauge branch line from Zaria to Kaura-Namoda is now under construction, approximately 145 miles in the direction of Sokoto; rail head had reached eighty-one miles from Zaria in December. This line will traverse a well-populated area with great possibilities for development, and it is anticipated it will be open for traffic about October, 1928. An extension is also under construction from Kano towards Hadeija, 100 miles, and a branch line is being built from Ifo-Idogo (twenty-four miles); it is expected that the latter should be open for traffic about June, 1928, and about fifty miles of the former in October, 1928.

113. The gross earnings during the financial year ended 31st March, 1927, were £2,396,011, the highest figure recorded in the history of the railway, and the gross working expenditure



£1,418,625, making the net receipt £977,386. The total number of passengers carried was 2,621,432, an increase of 208,319 over the number carried the previous year, and the tonnage of goods and minerals hauled was 948,304 tons, an increase of 151,025 tons over the previous year's tonnage.

114. The estimated revenue for the calendar year is placed at £2,332,155 and the approximate expenditure at £2,373,543, which includes contribution to Renewals Fund, interest charges and the cost of departmental services, pensions, etc.

115. There are now 178 stations open for traffic:—

Western Division	...	...	...	...	70
Northern Division	...	...	...	...	47
Eastern Division	...	...	...	...	61
					<hr/> 178 <hr/>

116. The Transportation Department is under the control of the Superintendent of the Line, with headquarters at Ebute Metta (a suburb of Lagos). He is assisted by two Assistant Superintendents of the Line, one for traffic operation and commercial matters, and one for locomotive working. The line is divided into three divisions, each in charge of a Divisional Superintendent, assisted by Assistant Divisional Superintendents as under:—

Western Division.—Iddo, Apapa to Zungeru.

Northern Division.—North of Zungeru to Kano (including Baro Branch and also the Bauchi Light Railway).

Eastern Division.—Port Harcourt to Jos and Kaduna Junction.

117. A motor transport service is running in the Zaria and Sokoto Provinces, mainly between Zaria and Gusau. This service comprises modern lorries and is augmented by roadless track vehicles which are being worked experimentally on behalf of the Empire Cotton Growing Corporation (to whom they belong). The motor service will move further afield as the branch Railway Line opens operations between Zaria and Gusau.

118. *Roads and Bridges*.—Approximately 3,000 miles of motor road are maintained by the Public Works Department. These roads are surfaced with laterite or similar gravel except in the Delta Provinces where they are mainly "earth" roads. To cope with the increasing motor traffic the Lagos-Ibadan, Ibadan-Ilesha and a few other roads have been widened. About thirty miles of stone metalled and tarred surfacing has already been laid on the Lagos-Abeokuta road and it is proposed to extend this method of construction. Localities where suitable stone is available are however limited, and as transport will in many cases prove prohibitive the problem of satisfactorily maintaining the more important roads in Nigeria is likely to be one of some difficulty. The existing roads will withstand reasonable traffic throughout the year but beyond certain traffic limits deterioration is rapid and maintenance practically impossible. Limitation of axle loads and speeds and the use of pneumatic tyres may mitigate the trouble, and the development of multi-wheeled vehicles or of "road-trains" may provide a solution.

119. In addition to the Public Works Department roads, the Native Administration have constructed and maintained a very considerable mileage of roads which are serviceable for motor traffic in the dry season.

120. New bridges are designed to withstand heavy traffic, and the older bridges on all important routes have been or are being reconstructed.

121. The special road programme inaugurated on the instructions of His Excellency has been well advanced. The work already in hand involves about 580 miles of road of which about 290 miles have been completed during the year. In addition about 740 miles of road survey has been completed.

122. Road works under construction include the Rigachikun-Jos road (163 miles), Puntua-Yashi road (76 miles), Bida-Zungeru road (56 miles), Abakaliki-Ogoja road (60 miles), Oturkpo-Katsina Ala road (91 miles), Share-Jebba road (30 miles), Ara-Ijero road (9 miles) and Ilugun-Olokemeji road (16 miles). The Jemaa-Jagindi road (16 miles) and the Ondo-Agbabu road (40 miles) have been completed. All these road works involve numerous bridges of considerable size.

123. Work on the Wudyl Bridge over the Challowa River in Kano Province is well advanced. The two abutments and four piers are completed and the steel work for the one-155 foot and seven-100 foot spans is now being delivered and assembled. Work has been commenced on the long embankment and two reinforced concrete pile bridges (with spans totalling 643 feet) over the Misau River in Bauchi Province. Arrangements have been made for bridging the Imo River in Owerri Province with a reinforced concrete pile bridge of 426 feet total span. This bridge with its new approach roads will establish direct road communication between Port Harcourt and Aba and the Calabar Province.

124. Bridges on the Kaduna-Zaria road (52 miles) will shortly be completed, when this recently-made road will be thrown open to general traffic. The work includes three 100-foot span bridges.

125. Replacement of the old bridges on the Abeokuta-Ijebu-Ode road, on the Ibadan-Ife road and on portions of the Oshogbo-Benin road and of minor bridges on other roads is being undertaken.

126. The services of the Posts and Telegraphs Department continue to expand in all directions. Increases ranging from seven *per cent.* to as much as fifteen *per cent.* are shown in the net revenue, telegrams, postal orders, and sale of stamps. The raising of the limit of weight for parcels to 22lb. has evidently been appreciated, judging by the mail increases shown in the numbers of parcels received over the former 11lb. limit of weight. The Money Order business has received a very much needed fillip by the reduction of commission rates; it is however too soon to express an opinion as to the effect of this reduction on the volume of orders issued. New postal telegraph offices have been opened at Ede, Ife, Ondo, Imo River, and Damaturu, a departmental post office has been opened at Ashaka whilst postal agencies have been established at Gudi, Iafia, Kafanchan, Ikirun, Okrika, Abak and Ohafia. Increasing use is being made of motor transport, the principal contracts entered

into during the year being for the conveyance of mails between Enugu and Abakaliki, Oron and Eket and Jos and Maiduguri. During 1927 a contract was entered into with the Niger Company for transport of mails on the Niger River between Burutu and Baro. Telegraph construction has continued, in spite of staff difficulties, throughout the year on the Zaria-Gusau Railway; other construction works completed during the year were Ede-Ife-Oshogbo and Akure-Ondo lines. The wireless receiving sets working at Kaduna and Lagos have been used exclusively for "Rugby" news and for the greater part of the year have given satisfactory results, the failures in almost every case being due to atmospherical conditions.

127. A Government Savings Bank is worked and controlled by the Posts and Telegraphs Department and it is pleasing to find that during 1927 the number of new accounts has steadily increased. At the same time the number and amount of withdrawals have also increased. Fewer accounts were closed during the year than for some years past. An additional savings bank office was opened at Umuahia bringing the total number of offices up to thirty.

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## VI.—JUSTICE, POLICE, AND PRISONS.

128. *Legislation.*—The West African Frontier Force Reserve Ordinance (No. 5 of 1927) repeals Chapter 38 of the Laws and re-enacts it substituting similar provisions with certain modifications.

129. The Motor Traffic Ordinance (No. 10 of 1927) repeals Chapter 109 of the Laws and re-enacts it giving wider and clearer provisions in regard to motor traffic in Nigeria.

130. The Poisons and Pharmacy Ordinance (No. 15 of 1927) repeals Chapter 50 of the Laws and replaces Parts I and II thereof by other provisions.

131. The Dangerous Drugs Ordinance (No. 16 of 1927) re-enacts Part II of Chapter 50 of the Laws and substitutes other provisions in regard to dangerous drugs in order to comply with International Convention.

132. The Roads and Rivers (Repeal) Ordinance (No. 18 of 1927) repeals Chapter 107 of the Laws with effect from the 1st April, 1928, the date upon which it is proposed that direct taxation shall become general throughout Nigeria.

133. The German Missions (Repeal) Ordinance (No. 21 of 1927) repeals Ordinance No. 10. of 1925 to enable German Missions who have returned to the scene of their former activities to recover possession of their property.

134. The Income Tax Ordinance (No. 23 of 1927) provides for the levy and collection of a tax assessed upon the estimated chargeable income payable annually by every adult (male) person resident in the Colony, with effect from the 1st April, 1928.

135. *Police.*—In the Northern Provinces with the exception of the patrols mentioned below, the Force has been occupied mostly in the more purely police duties of prevention and detection of crime, the provision of escorts where necessary, and,

especially in the Townships, the many other duties of police. Patrols in which police have been engaged are as follows:—

Adamawa Province	...	...	2
Benue Province	...	...	1

136. The establishment of European Officers of the Force has now two vacancies. The rank and file is up to strength; and the improvement and expansion of a Central Recruits' Training Depot is making a noticeable effect in the increased efficiency of the Force. Permanent barracks for the Kano Police Detachment have been completed during the year.

137. The Railway Police Detachment has been increased in strength during the year on account of the additional duties imposed upon them by the completion and opening to ordinary traffic of the line Makurdi-Jos-Kaduna Junction.

138. Crime in those areas of the Northern Provinces in which police are occupied, is normal. The amount of serious crime is small, although it should here be observed that signs are not lacking of a tendency on the part of those engaged in the making or uttering of counterfeit coin, to extend their activities into the southern portions of the Northern Provinces.

139. In the Southern Provinces the state of crime has been normal during the year and nothing of outstanding importance in this respect has occurred.

140. In January last, the duties of Preventive Service on the Eastern Frontier were taken over by the police from the Customs Department which had hitherto undertaken this work. The Force consists of one Assistant Commissioner of Police and sixty-seven rank and file and operates along the border from Tiko up as far as Fontem. A series of small Preventive posts have been established at intervals between these points. The distance requiring supervision on this Frontier is much larger than that on the Western Frontier and the difficulties experienced in dealing with smuggling are greater, owing to the hilly nature of the ground, the large expanse of water in the Mungo River and the numerous creeks near the coast line, all of which features afford considerable facilities to smugglers and render the work of the police correspondingly arduous. Considerable progress has been made during the year and the police have carried out their duties very satisfactorily in the circumstances.

141. In April the two new offices of Senior Commissioner of Police were created in order to relieve the Inspector-General of a certain amount of routine work and responsibility which could reasonably be delegated to a senior officer. Consequently the Southern Police Force has been divided into two areas, each in charge of a Senior Commissioner of Police. One Senior Commissioner has charge of all police in the provinces west of the Niger, and the other has charge of all in the provinces east of the Niger.

142. In view of the approaching institution of taxation in the Southern Provinces, an increase of 500 rank and file was granted during the year, as a temporary measure, and these have been distributed throughout the provinces so that a mobile body of men should be in readiness should any emergency arise. This additional force will gradually be absorbed into the authorised establishment or reduced in number periodically

according as they can be dispensed with. Thus the Special Police, as such, will eventually disappear. About one half of the total number granted has already been enlisted and is in training.

143. During the month of September the political situation in Warri became very unsatisfactory owing to a variety of causes. A patrol was sanctioned and operated there for a period of nearly three months. The patrol, which consisted of four officers and about 200 men, succeeded in bringing the province back to a state of normality at the close of the year.

144. Two escorts operated during the year in the Ogoja Province. The first of these was sanctioned owing to a long-standing dispute between the people of Ogada and Apiampum over the respective boundaries of their lands. The dispute resulted in litigation which was finally settled, when the full Court dismissed an appeal brought by the people of Ogada against Apiampum. It remained to demarcate the boundary according to the decision of the Court, and for this purpose an escort accompanied the District Officer on the 22nd March. No serious opposition was encountered and the escort withdrew on the 12th April, when the demarcation of the boundary was completed. The second escort in the Ogoja Province was also due to a land dispute, this time between the towns of Igbo-Emabar and Assigo. No resistance was offered.

145. *Prisons.*—The daily average prison population in the Northern Provinces remains much as it was during 1926, namely 775 that year and 762 for this year to date. Prisoners are employed principally on station labour as required by the Magistrate and the health authorities.

146. Of improvements and extensions to prison accommodation completed during 1927 the most noteworthy are the construction and furnishing of an Infirmary Ward for Jos Prison, and the completion at Kaduna Prison of two blocks of permanent buildings containing respectively six cells for males and four for females. Other minor improvements have been carried out both at Kaduna and Maiduguri Prisons.

147. Prison industries have naturally their principal centre at Kaduna Prison, which is the largest of the convict gaols in the Northern Provinces, where the chief industries are tailoring, boat repairing and the manufacture of cane furniture. A certain amount of work for the general public is also undertaken by the Kaduna Prison Printing Press.

148. In the Southern Provinces good progress has been made in the re-building of the Port Harcourt and Enugu convict prisons. In addition to the manufacture of the bricks used in the new buildings, the entire construction is being carried out by convict labour.

149. The stone-breaking industry, commenced in the Lagos prison in a small way during 1926, has developed considerably and in addition to supplying a useful form of hard labour is most profitable.

150. From the 1st November, 1927, the complete output of wood furniture made in the Lagos prison carpenter shop has been handed over to the Public Works Department for issue to the new houses.

151. It is satisfactory to note that though great difficulty is experienced in recruiting a suitable type of warder there has been a marked improvement in the discipline of the prisoners.

152. The daily average number of prisoners in the Southern Provinces for the period 1st January, 1927, to 30th November, 1927, was 7,498 which is the highest daily average on record. It is expected that when the figures are available for the full year, the daily average will exceed 7,500.

## VII.—PUBLIC WORKS.

153. *Public Works*—It is estimated that the total expenditure by the Department for the year ending March 31st 1928 will be about £1,940,000 as compared with an expenditure of £1,230,000 for the year ended March 31st 1927. The expenditure shows a notable increase for the second year in succession and is well distributed over roads, building works and special works—water, electric light etc.

154. *Water Supplies*.—The Port Harcourt supply scheme has been completed. Work on the Ijebu-Ode scheme has made good progress; the collecting galleries and service reservoir (capacity 530,000 gallons) have been completed and work on the pumping plant, mains and street fountains is well in hand.

155. At Kaduna the intake tower in the Kaduna River is completed. Work on the intake tunnel and clear water reservoir is well in hand and work on the sedimentation basin and pump well has been commenced. Work on the scheme for supplying a part of the town of Ibadan has made good progress, the pumping plant has been installed and the pumping main laid. At Aba the well has been completed and the pumping plant installed. Work on the steel storage tank, mains and steel fountains is in hand.

156. Construction of the Kano scheme is still in abeyance, the Consulting Engineers having decided to send out one of their partners to make an investigation of local conditions at the Challawa River during the dry season.

157. *Electric Light and Power*.—Consumption in Lagos, both of power and light, shows a gratifying increase and the estimate for the financial year will certainly be exceeded. The plant for the Port Harcourt scheme is now ready for shipment and work on the buildings and distribution has been started. The proposals for the Kaduna scheme met with the general approval of the Consulting Engineers and orders for the plant will shortly be given.

158. *Building Work. Hospitals*.—The European Hospital and Sisters' Quarters at Enugu, the Medical Store at Lagos, the Quarantine Station at Apapa and the European Hospital at Jos were completed. Good progress has been made on three blocks of the African Hospital, Lagos, and work on the following is well in hand:—

159. Additions to European and African Hospitals Kaduna, African Hospital, Aba, Kano Native Hospital, Infectious Diseases Hospital, Enugu and the extension of the African Hospital, Calabar.

160. *Government Quarters.* The housing programme for 1926-27 comprised 135 quarters for Europeans and 303 for Africans. There was some delay in the final selection of certain sites but the work is approaching completion. The 1927-28 programme of sixty-one European and ninety-five African quarters is well advanced.

161. *Police Barracks.*—Work on the following has been completed.—Ido, Oke Suna (Lagos), Calabar and Enugu Barracks.

162. *Miscellaneous Buildings.* The following office buildings were completed.—Public Works Office, Lagos; Provincial Headquarters Office, Police Office and Public Works Office and Store at Makurdi. Post Offices, Oturkpo and Abeokuta. Work on the following is in hand. Lands Office, Lagos; Ilaro Court House; Divisional Office, Oturkpo; Provincial Office, Nassarawa, Kano. Two Rest Houses at Kaduna and a Rest House at Abeokuta were completed. Work on the Governor's Residence at Kaduna, two Rest Houses at Kano, W.A.F.F. Mess and Buildings, Kaduna, and a further extension to the Veterinary Establishment at Vom is in hand.

163. *Contract Work.*—The policy of letting contracts for building work has been further extended, such work including the Medical Store, the Oke Suna Police Barracks and the new Lands Office in Lagos and Government Quarters in Lagos and elsewhere.

164. *Harbours, Rivers, Creeks, Lagos Harbour.*—Navigable conditions, both inside and outside the harbour, continue to show improvement and the navigable draught of twenty-five feet has been well maintained throughout the entrance to the Harbour. The extension of the training bank has been continued with satisfactory results. The necessary replenishment and maintenance of the moles has been carried out. A portion of the eastern shore of the lagoon along the Marina is being repaired and revetted on lines which should improve the flow of water in the navigable channels.

165. The new wharf with four berths and sheds at Apapa has been completed and is in full working under the administration of the Railway. Coaling and refitting berths for the Marine Department at Apapa are nearing completion.

166. The preliminary investigations in connection with the new Carter Bridge were completed and the design is in progress of preparation. The reclamation of the Alakoro embayment has been commenced so as to be completed by the time the erection of the new bridge is commenced.

167. The Aro Quarry has continued to supply the stone necessary for Harbour Works, Railway and Public Works Department's requirements.

168. *Railway Ports, Port Harcourt.*—The second instalment of riverside wharfage has been completed during the year. This gives a total deep water berthage of 1,920 feet exclusive of two boat landing stages one at either end of berthage. The construction of a third single-storey transit shed to serve the above berthage, 620 feet long by 90 feet wide, has been commenced during the year and good progress made.

169. The erection of new coaling berth comprising 2,500 tons storage bunker and electrically-driven conveyor belt loading

machinery is nearing completion. A beginning has also been made with the retaining bank in connection with dredging of the southern extremity and reclamation in connection with traders' waterside plots at the northern or upstream extremity of the Port.

### VIII.—PUBLIC HEALTH.

170. There has again this year been a noticeable absence of any serious outbreak of epidemic relapsing fever and cerebro-spinal meningitis. Mild outbreaks of relapsing fever were reported in the Ondo Province early in the year and a limited number of cases occurred in the Plateau Province in August and September. There was a slight increase in the number of cases in the Plateau Province in October and a further outbreak has been reported from Abinsi in the Benue Province. The outbreaks have been mild in type.

171. Small outbreaks of cerebro-spinal meningitis were reported from Yola, Munshi and Kano Provinces in the Northern Provinces. Smallpox has been prevalent all the year in the Northern Provinces, outbreaks being reported from Kano, Zaria, Plateau, Bauchi, Yola and Kabba Provinces. Vaccination continues to be actively pushed as a preventative against smallpox and a special vaccination campaign under a medical officer has been started in the Plateau Province.

172. During the year cases of yellow fever were reported from Lagos, Badagry and Yaba. The Rockefeller Yellow Fever Commission are still vigorously pursuing their investigations on this disease. Plague continued in epidemic form in Lagos. In the Ijebu Province the disease appears to be gradually being eradicated. In Lagos the number of cases slowly decreased till July, when there was a slight increase up to October, when the cases again showed a decrease. This rise and fall corresponded with the percentage of infected rats caught. Most of the cases were of the bubonic type but a few pneumonic cases occurred. The Special Plague Staff has been vigorously carrying out the recommendations of Sir Edward Thornton throughout the year and in Lagos the deratting of the less congested parts of the town has been completed, only the small congested area having still to be dealt with. On the mainland the deratting of Ijebu Ode Town has been completed and the larger outlying towns in Ijebu Province are now being dealt with.

173. The work on the investigation of the tsetse fly and trypanosomiasis has been continued and good progress is being made in clearing heavy undergrowth of the river banks. The staff has been augmented by the addition of three travelling Sleeping Sickness Medical Officers whose duties are to visit the infected areas and treat the patients in their homes and it is hoped by this means to get in touch with many who would not Ijebu Province are now being dealt with.

### IX.—EDUCATION.

174. In the Northern Provinces the demand for education is growing steadily. Not all the requests for elementary schools made by various Native Administrations can be met, but whenever it has been possible to provide adequate native teachers



new schools have been opened. The policy of refusing to open schools, unless sufficient supervision by European officers of the Department can be given, is continued. Twenty-four new schools including two crafts schools have been started. European staff has been slightly under strength throughout the year, and on December 31st there were two vacancies for Superintendents of Education and two for Superintendents of Arts and Crafts. During the year four new Superintendents of Education have been appointed, and seven new Superintendents of Arts and Crafts. One Superintendent of Education was permanently invalided. Another temporarily invalided, is attached to the office of the Secretary to the Advisory Committee on Native Education in Tropical Africa.

175. The opening of seven Mission schools has been approved.

176. Twelve men trained at the Katsina College entered on their duties in six different provinces. One of these, by arrangement with the Sokoto Native Administration, has been appointed as a teacher on the Training College staff.

177. A special class was opened at Katsina in July for the preliminary training of candidates for the subordinate Medical and Sanitary Staff in the Northern Provinces. The class is attached to the Training College.

178. A conference of the more senior officers of the Department was held at Kaduna in March.

179. The Rev. A. G. Fraser of Achimota visited the Northern and Southern Provinces in April and May.

180. A new syllabus of work for Crafts schools has been submitted to Government for approval.

181. The question of the amalgamation of the two Departments of Education in the Northern and Southern Provinces has been under consideration during the year.

182. On September the 1st, the regulations under the Education (Colony and Southern Provinces) Ordinance (No. 15 of 1926) came into effect. The registration of those engaged in teaching began from that date but had not been completed by the close of the year.

183. The result of the Ordinance and of the regulations is already noticeable. So far it has only been found necessary for the Director and the Board to advise the compulsory closing of one school, but in several cases preliminary warnings have been sent with the result that the schools concerned were reorganised and made more efficient.

184. Quarterly meetings of the Board have been held throughout the year. At the meeting held in December the Board considered a position which was arising owing to the difficulty of defining what should or should not be regarded as religious instruction. The Board recommended that the Education Ordinance should be amended by the deletion of any reference to religious instruction and that exemption from certain provisions of the Ordinance should be granted by regulation to certain schools and classes of school which are concerned with religious instruction.

185. School committees are beginning to function throughout the Southern Provinces, and should prove of considerable assistance to the Board by bringing to the notice of members local problems and suggestions.

186. Arrangements have been made for building two Government Training Institutions for teachers which it is proposed to open in 1929. At the same time the Missions are taking steps in several cases to increase their facilities for the training of teachers.

187. In the Southern Provinces elementary education is given in forty-eight Government schools, and twelve Native Administration schools all of which are in the Cameroons Province. A Native Administration school has been built and will shortly be opened at Oyo. The number of Mission schools which have attained a standard that justifies Government assistance has increased to 244 and special reference must be made to the excellent work which is being done in the girls' schools which have been established by the Missions. It is significant that though only eight assisted schools in the Southern Provinces have reached a sufficiently high standard to be graded as "A" schools no less than five of these "A" schools are girls' schools.

188. At King's College arrangements have been made to admit a number of scholars who will be trained as Assistants to the Medical Department.

189. In September a Government Secondary School for Girls was opened at Lagos and twenty girls were accepted. Arrangements have now been made to add a Domestic Science side to the school and the number of pupils is being increased.

190. During the year the European personnel of the Department has been strengthened by the appointment of two Assistant Directors and fifteen Superintendents as well as of a Principal of the Girls' School and a Domestic Science Mistress. One Superintendent has been promoted, one has left on transfer to the West Indies and a third has retired.

## X.—LANDS AND SURVEY.

191. *Investigation and Development of Natural Resources.*—In the Northern Provinces all land is under the control and subject to the disposition of the Governor to be administered for the use and common benefit of the natives. In the Southern Provinces all land is not at the disposal of the Governor in the same way, but land may not be leased to a non-native without the Governor's approval. The general policy is to encourage cultivation of the soil by the native inhabitants themselves, but many leases up to ninety-nine years have been granted for commercial and other purposes and there are large tracts suitable for agriculture. It is essential that anyone who desires to cultivate rubber or other permanent crops should first visit Nigeria and ascertain the actual conditions. A new Land Department for Nigeria is being formed in order to deal with land questions.

192. *Surveys.*—A large programme of work was carried out by the Survey Department during the year, the principal items being:—

- (a) the extension of the main triangulation from Minna in the district of Ibadan;

- (b) the continuation of the topographical work in the area north of Minna and north of Enugu;
- (c) the large scale survey of the Urban Area of Lagos, the large scale survey of the town and township of Ibadan and the survey of Abeokuta town;
- (d) the survey of 900 areas on the minesfield; this was possible owing to the engagement of a Special Party of R.E. officers and men;
- (e) the removal of the Lithographic Plant from Kano to Lagos to enable work to be dealt with more expeditiously;
- (f) the fixing of numerous points by observed latitude and wireless longitude for the purpose of control.

193. Rainfall throughout Nigeria showed considerable variation for the average throughout the year, Lagos being nearly seventeen inches below the average for the last thirty-three years while Lokoja on the confluence of the Niger and Benue was nearly twenty-five inches above the average of the last twenty years.

Total rainfall at Forcados during 1927	145.83 inches.
Average rainfall at Forcados during 1927	12.15 ..
Wettest month in the year, June.	
Total rainfall at Lagos during 1927	55.20 ..
Average rainfall at Lagos during 1927	4.60 ..
Wettest month in the year, October.	
Total rainfall January-November at Lokoja during 1927	73.67 ..
Average rainfall January-November at Lokoja during 1927	6.70 ..
Wettest month in the year, August.	
Total rainfall at Sokoto during 1927	30.07 ..
Average rainfall at Sokoto during 1927	2.51 ..
Wettest month in the year, August.	

194. The Geological Survey continued its investigations in both the Northern and Southern Provinces. In the south work was carried on in Onitsha and Owerri Provinces attention being mainly directed to tracing out and mapping the westward extension of the southern end of the Enugu coalfield and the younger tertiary group containing lignites and clays. The former has been located as far west as the Mamu valley where a seam measuring three feet nine inches of fair quality coal has been found while the latter has been proved to be continuous from the Eastern Railway to Oba, near Onitsha. In view of Government's decision to open the lignite fields to prospecting this result is of considerable importance. In the north investigations have been commenced in Sokoto for water supply and while it is considered that conditions are generally unfavourable for obtaining artesian supplies it is thought probable that supplies, sufficient for domestic purposes, will be obtained by sinking wells up to depths of 200 feet and these will make considerable areas available for agricultural purposes. On the conclusion of the Tinfields survey it was decided to undertake the investigation of the mineralised belt extending from Minna to Birnin Gwari and the examination of that portion near Minna of which topographical maps are available is now in progress.

195. A Bulletin and an occasional paper dealing with fossil fish remains from Ameki and a Bulletin describing the geology and the occurrence of tinstone in Zaria and Kano Provinces and in the Calabar district were published during the year. A coloured geological map of the tinfields of Nigeria was compiled and issued in two sheets. A further Bulletin on the Nigerian Coalfield was also prepared for the press and arrangements made for its publication early in 1928.

196. Dr. Falconer, who had been Director of the Geological Survey since 1919, retired on pension in April last and has been succeeded by Dr. Wilson.

---

### XI.—LABOUR.

197. Throughout Nigeria and the mandated territory of the Cameroons all permanent labour, as distinct from the temporary labour used by native communities when necessary and beneficial to themselves, and approved by ancient native customary law, is voluntary. Permanent labour includes most labourers paid by the month; the artisans employed by Government Departments, Native Administrations, and trading firms; standing gangs of labourers employed on road-making and other public works, etc. No labour for private employers is recruited or engaged by Government or by the Native Administrations.

198. With the exception of some 6,000 labourers on the Cameroons Plantations, who have emigrated from the French Cameroons, there is no immigrant labour in Nigeria. The supply of labour for the Cameroons Plantations has continued satisfactory throughout the year.

199. The Roads and Rivers (Repeal) Ordinance (No. 18 of 1927) repeals Chapter 107 of the Laws of Nigeria with effect from the 1st April, 1928.

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### XII.—MISCELLANEOUS.

200. The Government Analyst's Department, which was formerly part of the Medical Research Institute, and as such was under the Medical Authorities, was constituted a separate Department during the year.

201. The Harbour Department was formed on the 1st April as a separate department under a Port Engineer who is generally responsible for the wharves, under-water structures, bridges, revetments, etc., in Lagos Harbour and who will also advise on matters concerning ports, other than Lagos Harbour, as required.

E. V. ROCHFORD RAE,

*Acting Senior Assistant Secretary.*

Chief Secretary's Office,  
Lagos, Nigeria,  
30th January, 1928.









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COLONIAL REPORTS—ANNUAL

No. 1385.

BASUTOLAND

REPORT FOR 1927

(For Reports for 1925 and 1926, see Nos. 1294 and 1336 respectively,  
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# BASUTOLAND.

## ANNUAL GENERAL REPORT FOR THE YEAR 1927.\*

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### PREFATORY NOTE.

#### History and Geography.

Basutoland, which is a native territory in South Africa, is bounded on the west by the Orange Free State, on the north by the Orange Free State and Natal, on the east by Natal and East Griqualand, and on the south by the Cape Province. Its area is 11,716 square miles. It lies between  $28^{\circ} 35'$  and  $30^{\circ} 40'$  south latitude, and between  $27^{\circ}$  and  $29^{\circ} 30'$  east longitude.

The altitude varies from 5,000 feet to 11,000 feet above sea-level, and the climate is, on the whole, healthy. The Maluti Mountains in former years were used entirely as cattle posts, but owing to the increase in population the Basuto have found it necessary to migrate there and build villages and cultivate the land, so that to-day the more or less inaccessible area is gradually becoming as thickly populated as the low-lying country to the west. In favourable seasons the Territory produces wheat, maize, and kaffir-corn, also

\* The financial information given in this Report is for the year ended the 31st March, 1927. Other details are for the calendar year 1927.

horses, cattle, and sheep; the export of wool for this year amounting to 12,906,789 pounds weight.

In 1818 the first Paramount Chief of Basutoland, Moshesh, gathered together the remnants of various tribes which had been scattered about South Africa during the wars waged by Moselekatse, and thus founded what to-day has become the Basuto nation, consisting of upwards of 540,000 souls.

A series of wars took place, from 1856 onwards, between the Basuto and the inhabitants of the Orange Free state, and it was not until 1868, when Moshesh was hard pressed by the Boers, that he appealed to the British Government for help and the recognition of his people as British subjects. This was carried into effect in March, 1868. In 1871 the Territory was annexed to the Cape Colony, and, after various disturbances, the Government of the Cape, in April, 1880, extended the provisions of the Cape Peace Preservation Act of 1878 to Basutoland, which included a clause providing for the general disarmament of the Basuto. The Basuto refused to accept the terms, and, after a war lasting nearly a year, an agreement was arrived at by which the Act was repealed and certain fines inflicted on the tribe.

Although outwardly peace has been restored, there still remained several chiefs who would in no way accept the terms, and it was eventually decided by the Government of the Cape Colony to hand over the administration to the Imperial Government. This took effect on the 13th March, 1884. Since that date the Territory has been governed by a Resident Commissioner under the direction of the High Commissioner for South Africa.

The principal languages are English and Sesuto.

The coin in circulation in the Territory is mainly South African, but late South African Republic coins are occasionally met with. Central Reserve Bank notes are brought into the Territory, but the local bank only re-issues the notes of Joint Stock Banks. Gold coin is unlimited, but the demand is practically negligible. £17,000 in gold and £2,000 in silver coin was exported during the year by the Maseru Branch of the Standard Bank of South Africa, Ltd.

The amount of coin in circulation at the end of 1927 was between £40,000 and £50,000, and notes between £100,000 and £125,000.

The Imperial Coinage Act, 1920, is in force in the Territory (High Commissioner's Notice No. 63 of 1920).

The weights and measures in use in Basutoland are the British Imperial, but the Colonial ton of 2,000 lb. is also used.

## 1.—GENERAL.

No serious faction fights occurred during the year. Friction continues to exist in the Leribe District.

**Basutoland Council.**

The twenty-second session of the Basutoland Council was held from the 8th to the 15th October, 1927. The following were the more important matters discussed :—

- (1) Administration of justice in Native Courts.
- (2) Increase of export duty on wool and mohair from  $\frac{1}{4}$ d. per lb. to  $\frac{1}{2}$ d. per lb.
- (3) Prohibition of the introduction of Persian and bastard sheep into the Territory.
- (4) Soil erosion—ploughing up of mountain slopes.
- (5) Education.
- (6) Basutoland Government Industrial School.
- (7) Stock theft.

## 2.—FINANCE.

The revenue for the financial year ended the 31st March, 1927, amounted to £274,404 and the expenditure to £272,627, an excess of revenue over expenditure of £1,777.

The balance of assets in excess of liabilities at the 31st March, 1927, was £94,135.

The following statements show the revenue and expenditure during the past five financial years :—

	REVENUE.				
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	£	£	£	£	£
Native Tax ... ..	121,234	134,689	127,532	139,776	132,072
Customs and Excise ...	62,011	71,043	76,765	84,196	87,352
Posts and Telegraphs...	7,522	8,038	8,520	8,428	7,648
Licences ... ..	7,097	7,585	7,928	7,766	8,758
Fees of Court or Office	814	784	906	1,084	933
Judicial Fines ... ..	1,305	2,009	1,991	3,022	1,911
Income Tax ... ..	3,755	6,773	12,996	13,759	10,784
Fees for services rendered.	2,605	1,366	1,484	1,386	1,278
Interest ... ..	2,550	2,341	1,735	1,819	2,158
Wool Export Duty ... ..	—	14,128	17,189	15,421	17,141
Miscellaneous ... ..	3,645	3,857	3,962	4,915	4,369
Totals ... ..	£212,538	£252,613	£261,008	£281,572	£274,404

## EXPENDITURE.

	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	£	£	£	£	£
Resident Commissioner	12,554	13,758	13,692	13,829	13,811
District Administration	12,934	12,670	12,790	13,091	13,690
Police ... ..	35,647	36,189	36,756	37,507	39,164
Posts and Telegraphs	10,043	10,437	10,118	10,458	11,676
Administration of Justice	9,116	9,806	11,078	11,659	11,194
Public Works Department	5,811	6,526	5,665	5,616	5,218
Public Works Recurrent	20,371	20,990	22,153	23,778	25,669
Public Works Extraordinary	2,335	3,661	2,383	8,820	6,872
Medical ... ..	20,443	20,575	22,795	21,548	22,617
Education ... ..	34,681	34,813	35,836	40,113	41,412
Government Industrial School	2,323	2,437	2,429	2,486	2,508
Audit ... ..	733	(a)	(a)	(a)	(a)
Agriculture ... ..	9,984	21,806 (b)	22,927 (b)	28,780 (b)	27,659 (b)
Allowances to Chiefs	11,290	12,448	12,324	11,994	11,691
National Council ...	1,830	1,950	2,193	2,037	1,909
Leper Settlement ...	20,845	20,036	19,077	19,306	19,401
Pensions ... ..	5,259	6,681	6,812	7,599	10,030
Miscellaneous ... ..	4,868	5,656	6,955	9,455	6,076
Expenditure from Surplus Balances.	3,480	1,230	4,214	—	2,030
<b>Totals</b>	<b>£224,547</b>	<b>£241,669</b>	<b>£250,197</b>	<b>£268,076</b>	<b>£272,627</b>

(a) Provided for under "Resident Commissioner."

(b) Includes cost of measures taken for eradication of scab.

## Income Tax.

The rates of normal and super tax remained the same as during the preceding financial year, and were imposed by the Basutoland Income Tax Proclamation, 1925. The Basutoland Income Tax Proclamation, 1926, amended the Income Tax Proclamation, 1920, as amended, in so far as the abatement allowable in the case of a taxpayer who was (1) married or (2) a widower or (3) divorced, but who, in the case of (2) and (3) maintained during any portion of the tax year a child of his own or a step-child who was, or would have been had he lived, under 18 years of age. This abatement was increased from £300 to £400 a year. The total collection of Income Tax was made up as follows:—

	£
Arrear Normal Tax ... ..	202
Current Tax—	
Normal Tax ... ..	9,013
Super Tax ... ..	1,569
<b>Total ... ..</b>	<b>£10,784</b>

The following table shows the sources from which taxable incomes were derived and the amount of tax paid from each source :—

	£
General Traders ... ..	6,815
Civil Servants ... ..	1,174
Employed persons ... ..	676
Others, including Bank ... ..	549
Non-residents ... ..	1,570
<b>Total ... ..</b>	<b>£10,784</b>

The number of incomes assessed for current tax in the various categories were :—

<i>Number.</i>	<i>Category.</i>	<i>Total of Taxable Incomes.</i>
		£
50	£500 and under	18,853
50	£501 to £750	31,266
23	£751 to £1,000	19,720
30	£1,001 to £1,500	34,498
10	£1,501 to £2,000	16,906
7	£2,001 to £4,000	16,562
6	Over £4,000	48,149
<b>176</b>	<b>Total Taxable income of persons assessed for current tax.</b>	<b>£185,954</b>

### 3.—PRODUCTION.

#### **Agriculture.**

*Locust Destruction.*—There were no fresh outbreaks of *voet-gangers* during the year and no flying locusts were observed in Basutoland. There was an exceptionally bad outbreak of "the Elegant Grasshopper" on the Maseru Reserve. These insects were responsible for a great deal of damage to gardens and to native crops on the Reserve. A campaign against these insects was carried on with prison labour and native school children.

*Agricultural Shows.*—An amount of £500 was provided for Agricultural Shows which were held at Leribe, Teyateyaneng, Maseru, Quthing, and Qacha's Nek. Whilst the shows were, on the whole, a success, the attendance was not as good as usual. Exhibits by the Agricultural Demonstrators at Maseru and Quthing proved a source of great interest to the natives attending the Shows at these places.

*Tree-planting and Donga Prevention.*—The Vote for tree-planting and donga prevention was £1,200. At the close of the year there were some 357,650 trees in the various Government Nurseries. During the year, 61,155 trees were issued and 4,707 planted on the various Reserves.

*Seed Wheat Bounty.*—The sum of £432 was set aside as a bounty on seed wheat. The bounty was confined to imported seed.

*Agricultural Demonstrators.*—There are now eleven demonstrators employed in various parts of the Territory. Great interest continues to be taken by the natives in the demonstrations and there is now evidence that the natives are beginning to realize the benefits of improved agriculture and to act on the advice given them by the Demonstrators.

*General.*—The maize and kaffir-corn crops were particularly good in the northern districts. In the midlands the crops were fair, and in the southern districts bad. The wheat crop in the north of Basutoland was very good, and in other parts of the Territory fair.

### Forestry, Fisheries, and Mining.

There are no natural forests in Basutoland and no fisheries. No mining operations are carried on.

## 4.—TRADE AND ECONOMICS.

The following is a return of the imports into, and the exports from, the Territory by general traders during the calendar year 1927, the figures for 1926 being given for purposes of comparison :—

### IMPORTS.

	1926.		1927.	
	No.	Value.	No.	Value.
Merchandise ... ..	—	£ 593,919	—	£ 780,470
Livestock—				
Horses, Mules, &c. ... ..	70	239	127	490
Cattle ... ..	768	2,147	2,747	6,947
Sheep and Goats ... ..	264	400	598	1,059
Grain—	Muids.		Muids.	
Wheat and Wheat-meal ... ..	4,741	8,395	5,925	9,506
Maize and Maize-meal ... ..	55,892	39,607	46,602	34,155
Kaffir-corn ... ..	25,256	19,766	8,452	9,631
Other Produce ... ..	—	541	—	635
Totals ... ..		£665,014		£842,893



**EXPORTS.**

	1926.		1927.	
	No.	Value.	No.	Value.
<b>Livestock—</b>		£		£
Horses, Mules, etc. ...	37	264	21	95
Cattle ... ..	2,848	12,396	1,981	9,620
Sheep and Goats ... ..	453	390	867	569
<b>Grain—</b>	<i>Muids.</i>		<i>Muids.</i>	
Wheat and Wheat-meal ...	103,402	111,694	103,568	115,455
Maize and Maize-meal ...	5,561	3,092	37,512	17,668
Kaffir Corn ... ..	2,325	2,277	22,062	20,020
Oats ... ..	98	40	55	23
Barley ... ..	45	24	67	35
Beans and Peas ... ..	2,031	1,560	3,458	3,521
<b>Wool and Mohair—</b>	<i>Lb.</i>		<i>Lb.</i>	
Wool ... ..	12,131,574	427,047	12,906,789	508,687
Mohair ... ..	2,156,603	121,098	2,132,907	139,226
<b>Hides and Skins—</b>				
Hides ... ..	350,084	10,275	492,626	18,289
Skins ... ..	202,786	5,229	217,351	5,356
Miscellaneous ... ..	—	1,564	—	538
<b>Totals</b> ... ..		£696,950		£839,097

**OTHER STATISTICS.**

Government imports during the year amounted to £51,562, as compared with £45,061 in 1926.

The total exports of wool and mohair during the year amounted to 16,130,144 lb., of which 15,039,696 lb. were exported by general traders.

**General.**

All imports by traders are made through wholesale houses in the Union of South Africa, and all exports are to the Union of South Africa. It is therefore impossible to give the origin of goods imported or the ultimate destination of goods exported.

With the exception of fuel, soap, motor oil and petrol, which are purchased in the Union, all Government imports are made through the Crown Agents for the Colonies, London.

**5.—COMMUNICATIONS.****Railways.**

There is only a small branch line from Marseilles (on the Bloemfontein-Natal main line) to Maseru, and only one mile of this is in Basutoland.

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### **Roads.**

During the year the organisation for the maintenance of roads, which previously had been sub-divided according to districts under the Assistant Commissioners and the Public Works Department, was handed over to the Public Works Department and the Assistant Engineer placed in sole charge.

An exception to this was made in the case of the Qacha's Nek District, which was considered too inaccessible to be controlled by the Assistant Engineer whose Headquarters are in Maseru.

The reorganisation included the replacement of four Road Overseers by two men having more suitable qualifications, who were provided with motor transport; and the territory on the west of the mountains was divided into two road districts, north and south. In addition, provision was made for the employment of four native overseers to supervise the gangs under the direction of the two Inspectors of Roads.

A schedule of roads has been prepared, in which each road is placed in a class A, B, or C according to its importance, and various standards of width and degree of passability were laid down.

The reorganised control has been in operation for the latter half of the year, during which abnormally heavy rains have kept all gangs busy in making repairs, so that, although it can be reported that the organization is working efficiently, it is too early to report definite improvement.

During the year work was started on a much-needed bridge across the Telle River on the Quthing-Cape Province border. This bridge is being built by the Public Works Department of the Union of South Africa, the Administration of Basutoland bearing half the cost.

### **Postal.**

All districts in Basutoland are linked up with Maseru by telegraph and telephone lines with the exception of Qacha's Nek, which is connected by telegraph and telephone with Matatiele in East Griqualand. The systems are owned by the Basutoland Government. Both telegraph and telephones are used by the general public and public telephone call offices are attached to each Post Office.

There are nine telegraph offices in the territory and 154½ miles of telegraph wire. During 1927, telegraph messages numbering 24,726 were dealt with.

There are nine central telephone offices with 123 telephones in service. The length of local exchange telephone wire is 75½ miles and long-distance wire 486½ miles.

The net postal, telegraph, and telephone revenue for the year ended the 31st March, 1927, amounted to £7,648, as compared with £8,428 for the year 1925-6.

The expenditure amounted to £11,676, as compared with £10,458 for 1925-26.

The following table shows the number of deposits in, and withdrawals from, the Post Office Savings Bank for the last two years :—

		<i>Deposits.</i>	<i>Withdrawals.</i>
1925-26	...	1,752, value £8,052.	615, value £7,736.
1926-27	...	1,587, value £6,925.	923, value £7,404.

The following comparative table shows the number and value of money and postal orders issued and paid during the past two years :—

		<i>Issued.</i>	<i>Paid.</i>
1925-26	...	29,154, value £26,971	34,172, value £38,513.
1926-27	...	32,225, value £28,611	65,457, value £74,003.

## 6.—JUSTICE, POLICE, AND PRISONS.

### Justice.

During the year under review 3,185 crimes were reported or known to the police, the number of persons proceeded against being 2,456. Convictions in magisterial courts numbered 2,080 and in the Resident Commissioner's Court 95, as compared with 1,946 and 166 respectively in 1926.

The following table shows the number of convictions for various crimes and offences during the last four years :—

		1924.	1925.	1926.	1927.
<b>IN MAGISTERIAL COURTS :—</b>					
1. Offences against the person	... ..	258	125	97	287
2. Offences against property	... ..	137	327	244	272
3. Offences against the liquor laws	... ..	76	48	52	37
4. Other Crimes	... ..	951	1,446	1,409	1,484
<b>IN THE RESIDENT COMMISSIONER'S COURT :—</b>					
1. Murder	... ..	6	4	6	1
2. Culpable Homicide	... ..	26	18	38	24
3. Attempted murder	... ..	—	—	—	1
4. Rape	... ..	—	2	2	—
5. Unnatural crime	... ..	—	1	—	—
6. Other offences against the person	... ..	11	13	11	4
7. Offences against property with violence to the person.	... ..	33	84	298	48
8. Other offences against property	... ..	—	28	41	15
9. Other crimes	... ..	4	1	1	—

### Police.

The Police force consists of native non-commissioned officers and men under European officers.

**Prisons.**

There are seven gaols and three lock-ups in the Territory, and, during the year, 2,401 prisoners passed through them, as compared with 2,494 in 1926.

**7.—PUBLIC WORKS.****Buildings.**

All the works carried out during the year were of minor importance.

**Water Works.**

Elevated tanks to hold a supply of 2,400 gallons of water have been erected at Maseru.

A new scheme for increasing the water supply at Qacha's Nek was commenced and four miles of 2-inch piping have been laid. The remaining three miles of piping will be laid next year. It is estimated that the new scheme will augment the water supply by 15,000 gallons per diem.

**8.—PUBLIC HEALTH.**

During the year, 2,593 patients were treated in the various hospitals of the Territory—showing an increase of 306 over the number for the previous year. There were 148 deaths. Of the hospital patients, 90 were Europeans, the majority of whom came for surgical assistance.

After considerable delay, the Qacha's Nek hospital was opened towards the end of the year, and the number of patients received into it, in a short time, showed how badly needed it was in that remote district.

The dispensaries continue to do most excellent work and the yearly increase of patients continues. During the year, 63,061 patients received treatment, being an increase of 1,259 over the number for 1926.

21,870 persons were vaccinated, and the revenue collected in hospital and dispensary fees was £2,438 5s.

The following table gives the above statistics arranged according to district :—

<i>District.</i>	<i>In-patients.</i>	<i>Out-patients.</i>	<i>Vaccinations.</i>	<i>Revenue.</i>		
				£	s.	d.
Maseru ...	968	13,275	--	639	0	3
Leribe ...	483	12,695	3,763	534	17	6
Mafeteng ...	500	10,115	9,109	373	2	0
Mohale's Hoek...	332	7,350	7,061	280	6	3
Quthing ...	234	9,130	1,200	309	7	9
Qacha's Nek ...	69	3,231	—	82	7	6
Teyateyaneng ...	7	7,031	737	219	3	9
Mokhotlong ...	—	234	—	—	—	—
<b>Totals ...</b>	<b>2,593</b>	<b>63,061</b>	<b>21,870</b>	<b>£2,438</b>	<b>5</b>	<b>0</b>

for his daily life and the further instruction which can of necessity only be available for the comparatively few. They provide for centralised intermediate schools which will relieve the elementary schools of work which ought not ordinarily to be undertaken by them. The removal of the higher classes will give the teachers time for proper instruction of the purely vernacular classes; while staffs suitable for giving education in the higher classes will be concentrated at the intermediate schools.

Under the new system schools are divided into three classes :—

- (1). Elementary Vernacular Schools which are prohibited from going beyond Grade VI (roughly corresponding to Standard III);
- (2) Intermediate Schools including all classes up to Standard VI;
- (3) Institutions.

It is expected that it will be possible to inspect each school at least once annually and that the present staff of Inspectors will be in a position to enforce the carrying out of the syllabus in the elementary vernacular schools and to help those in charge of intermediate schools to make the best of the opportunities they may have of giving instruction in practical subjects as well as in book-work.

The institutions for the training of teachers have their standard set for them by the Education Department of the Cape Province, which for many years past has given most valuable assistance to Basutoland and, by means of inspection and examination, has set before the institutions a definite standard which is recognised throughout South Africa and Rhodesia.

Bursaries will be granted to a few of the pupils going from Intermediate Schools to institutions and from institutions to the South African Native College at Fort Hare. As the elementary vernacular schools are widely spread and the intermediate schools are more or less within reach of anyone willing to make an effort, any boy of outstanding character and ability will have a fair chance of continuing his education, even if his parents are extremely poor. As the Inspectors get to know their districts, they will find out not only those who are the brightest pupils but they will learn from their own observations and from teachers' statements those who are the best pupils and most likely to make good use of further education. The institutions should also benefit by receiving each year a certain number of selected pupils.

### Statistics.

The average attendance of pupils in schools and institutions is now 34,134, while the number of scholars on the roll is 46,945.

The following table shows the average attendance of pupils during the last ten years :—

TABLE 1.

<i>Year.</i>	<i>Average Attendance.</i>	<i>Increase.</i>	<i>Decrease.</i>
1918	21,160	391	—
1919	22,556	1,396	—
1920	23,479	932	—
1921	22,586	—	893
1922	23,424	838	—
1923	26,124	2,700	—
1924	29,267	3,143	—
1925	30,005	738	—
1926	33,074	3,069	—
1927	34,134	1,060	—

During this period there has been an increase of about 13,000 units of average attendance. After the exceptionally large increase in 1926, the increase this year is slightly below the average annual increase.

TABLE 2.

Grants to Missions for elementary schools for the year ending the 31st December, 1927, were as follows :—

	£
Paris Evangelical Mission Society ... ..	20,002
Roman Catholic Mission ... ..	6,648
Church of England Mission ... ..	3,212
	<hr/>
	£29,862.

TABLE 3.

Elementary schools according to size and denomination.

<i>Mission.</i>	<i>Over 200.</i>	<i>150 to 200.</i>	<i>100 to 150.</i>	<i>70 to 100.</i>	<i>60 to 70.</i>	<i>45 to 60.</i>	<i>25 to 45.</i>	<i>20 to 25.</i>	<i>Under 20</i>	<i>Total.</i>
P.E.M.S. ...	6	20	52	59	34	55	86	30	16	358
R.C. ...	2	9	9	15	14	12	35	11	7	114
C. of E. ...	0	1	7	10	8	8	17	7	3	61
Totals ...	8	30	68	84	56	75	138	48	26	533
	-3	+1	+8	-19	+9	-18	+9	+12	+3	+2

The increases and decreases as compared with 1926 are given under each column. The table shows that two-fifths of the elementary schools in the Territory come under the classification of "one-teacher schools." Two new schools appear to have been added to the list since last year, but these are schools which were closed temporarily and were reopened this year. According to the agreement with the Missions, no new schools are to be started until the standard of those already existing has been improved.



TABLE 4.  
Enrolment of pupils in elementary schools.

<i>Mission.</i>	<i>No. of Pupils on Roll, September, 1926.</i>			<i>No. of Pupils on Roll, September, 1927.</i>		
	<i>Boys.</i>	<i>Girls.</i>	<i>Total.</i>	<i>Boys.</i>	<i>Girls.</i>	<i>Total.</i>
P.E.M.S. ... ..	10,553	20,805	31,358	10,652	21,892	32,544
R.C. ... ..	2,074	6,329	8,403	2,145	6,825	8,970
C. of E. ... ..	1,494	2,997	4,491	1,507	3,178	4,685
Totals ... ..	14,121	30,131	44,252	14,304	31,895	46,199

The increase is 1,947, as compared with an increase of 2,400 in 1926. The proportion of girls as compared to boys continues to increase.

Except in the mountains there are now no large areas of grazing veld, and, as the cattle have to graze on the narrow strips of grass lying between the cultivated lands, each herd of cattle requires several herd boys to look after it. Boys are keen on education, and there are few who would not attend school if they had the chance, but they cannot be spared. As further land is broken up, more herd boys are wanted, and the tendency is for the proportion of girls to boys to increase rather than to even up. The above figures show that the proportion of girls to boys is over 2 to 1.

TABLE 5.  
Enrolment of pupils in institutions.

<i>Mission.</i>	<i>Institution.</i>	<i>No. of Pupils on Roll, September, 1926.</i>			<i>No. of Pupils on Roll, September, 1927.</i>			<i>Grant.</i>
		<i>Boys.</i>	<i>Girls.</i>	<i>Total.</i>	<i>Boys.</i>	<i>Girls.</i>	<i>Total.</i>	
P.E.M.S. ...	Morija (Normal & Agric.)	139	—	139	138	—	138	£ 2,100
P.E.M.S. ...	Th. Morena (Normal & Indus.)	—	38	38	—	69	69	600
P.E.M.S. ...	Cana (Indus.)...	—	25	25	—	31	31	350
P.E.M.S. ...	Leloaeng (Indus. & Agric.)	53	—	53	56	—	56	800
R.C. ...	Roma (Normal, Indus. & Agric.)	113	248	361	141	307	548	800
C. of E. ...	Masite (Normal Indus. & Agric.)	26	—	26	30	1	31	450
C. of E. ...	Maseru (Indus.)	—	37	37	—	36	36	150
Totals ... ..		331	348	679	365	444	809	£5,250

The figures given for Roma include a considerable number of day scholars who attend the boarding schools for boys and girls at Roma. In the other Missions only boarders are enrolled in the institutions.

TABLE 6.

Average attendance of pupils in elementary schools.

<i>Mission.</i>	<i>Year ending September, 1926.</i>			<i>Year ending September, 1927.</i>		
	<i>Boys.</i>	<i>Girls.</i>	<i>Total.</i>	<i>Boys.</i>	<i>Girls.</i>	<i>Total.</i>
P.E.M.S....	7,258	15,477	22,735	7,404	15,958	23,362
R.C. ...	1,496	4,956	6,452	1,540	5,181	6,721
C. of E. ...	1,032	2,220	3,252	1,033	2,334	3,367
<b>Totals...</b>	<b>9,786</b>	<b>22,653</b>	<b>32,439</b>	<b>9,977</b>	<b>23,473</b>	<b>33,450</b>

The total average attendance in elementary schools of 33,450 is 1,011 more than last year.

### European Schools.

The eight European schools with a total attendance of 115 pupils received a grant of £1,900. These schools have good buildings and are well equipped. They provide only elementary education and prepare pupils for schools outside Basutoland.

### 10.—LABOUR.

The following figures give the number of passes issued to natives to leave the Territory for labour purposes during the past two years :—

	<i>Mines.</i>	<i>Railway Construction.</i>	<i>Agriculture.</i>	<i>Miscellaneous Labour.</i>	<i>Total.</i>
1926 ...	34,504	659	19,217	41,484	95,864
1927 ...	24,880	173	9,507	23,407	57,967

### 11.—VETERINARY.

#### ANTHRAX.

Twenty-eight outbreaks of anthrax occurred during the year, being twelve less than last year.

The policy of keeping all transport oxen inoculated on the western roads has been enforced, and altogether 41,039 animals have been inoculated. Most of these inoculations have been carried out by the Police Force, and the ready co-operation of Assistant Commissioners and Police Officers in this matter has been much appreciated.

The importance of burying anthrax carcasses intact is being better understood by cattle owners.

No anthrax has been diagnosed amongst equines and ovines.

### EQUINE MANGE

There is every evidence that very considerable progress has been made in the eradication of equine mange, and it is hoped to stamp out this disease in the near future.

Energetic propaganda work has been carried out during the past 12 months, and every effort has been made to impress upon horse owners the necessity of reporting and bringing their animals for early treatment.

During the year, 14,202 animals were treated, but it is thought that a number of these were not true cases of sarcoptic mange, native dip supervisors treating all cases of skin troubles as mange.

All evidence goes to show that the position in the mountain area has improved immensely, but reports have come to notice of abandoned mange-infected horses, and every effort is being made to have these destroyed or collected by the chief and brought to a tank for treatment.

### SCAB.

Excellent progress is being made in the eradication of this disease.

The simultaneous tank inspection during the early summer of 67 protected areas, involving 846,293 sheep and goats, gave results better than could have been anticipated. All these sheep and goats were put on a table and subjected to a thorough hand inspection and only 82 sheep and goats, representing 36 flocks, were found to be infected with scab.

During the year not less than 2,118,319 sheep and goats were dipped. Most of this dipping was done at non-protected tanks and in dealing with moving sheep.

The prevalence of scab in the mountains where no tanks have been operating is an education and negatives the theory that there is little or no scab in the mountains. During the year the Thaba Putsoa tank in the Maseru district was opened. This tank is 9,000 feet above sea-level and taps a very thickly-populated sheep country. In subjecting these flocks to a simultaneous dipping it was found that 65 per cent. of them were infected and in some of them over 50 per cent. of the sheep were scab infected. An experience of this sort clearly demonstrates the importance of pushing tank erection as quickly as possible, as with such centres and the constant movement of sheep it can easily be seen in what jeopardy the protected areas stand.

The financial position became very serious this year, and it was quite apparent that unless more money was forthcoming there

was little hope of carrying on the work to its final issue. It is very gratifying to report that the Basutoland Chamber of Commerce and the National Council unanimously agreed to a suggestion that the duty on wool and mohair exported from the Territory should be increased from  $\frac{1}{4}$ d. to  $\frac{3}{4}$ d. per lb. and as a result it is hoped by practising economy ultimately to build tanks throughout the mountain areas and so give every sheep-owner proper facilities for dipping.

It is estimated that about 75 more tanks are required in the Territory, and it is hoped to complete this building scheme in about four years. The building of tanks is a slow process and in view of the climatic difficulties, all material having to be transported on pack animals, together with the human factor, there are many setbacks. The work is, however, becoming better understood and with a stronger financial position it is now possible to give the work to a better class of workman.

Before the end of the summer it is hoped that the whole of the Quthing District will be tanked, and it will be interesting to observe the result of the dipping in a completely tanked district.

During the year, 17,732 sheep and goats were exported; 12,684 of these went to East Griqualand via Qacha's Nek.

On the whole it is thought that the native staff have been more satisfactory than last year, but the necessity of giving these men constant European supervision is continually demonstrated.

The experiment of appointing native Scab Inspectors is still in progress, but it is too early to give an opinion on the result. It is proposed to increase these Inspectors considerably during the next financial year.

The European Scab Inspectors have had a very strenuous year; the picking of sites and organising the work connected with new tanks has in many instances considerably added to their scab work.

### **Wool Industry.**

There is abundant evidence that the propaganda against the bastard and Persian ram is bearing fruit. In some wards all bastard rams have been castrated, and there is a general tendency to kill these sheep for food in preference to the Merino. Scab Inspectors are continually preaching against the bastard sheep and trying to educate the sheep-owner accordingly. Some of the traders are also carrying out useful work in this direction and they are, of course, in a better position to do this than is the Veterinary Department as they are constantly purchasing the wool of the country.

As a result of this campaign, sheep-owners are now clamouring for better facilities to substitute their castrated bastards with good

Merino rams. A bounty of £500 has now been provided on imported Merino rams of approved type and excellent results are anticipated.

### **Stud.**

The stud season owing to drought has been a very unfavourable one, and there was a general absence of green grass right up to the end of the year. This reacted on the milk supply for foals and the favourable conditions necessary for early pregnancy.

### **General.**

The usual outbreaks of strangles, gallsickness, and biliary fever have been successfully treated.

During the year, 2,066 professional visits and attendances were made by the Principal Veterinary Officer.

## **12.—MISCELLANEOUS.**

### **Legislation.**

The following proclamations were promulgated during the year :—

- (1) No. 2.—Further Appropriation (1925-26) Proclamation, 1927.
- (2) No. 5.—Radio Proclamation, 1927.
- (3) No. 13.—Education Fund Proclamation, 1927.
- (4) No. 14.—Sheep and Goats Importation Restriction Proclamation, 1927.
- (5) No. 15.—Further Amending the Basutoland Stock and Produce Theft Repression Proclamation, 1921.
- (6) No. 18.—Amending in certain respects the Obscene Publications (Basutoland) Proclamation, 1912.
- (7) No. 23.—Amending the Basutoland Motor Vehicle Proclamation, 1926.
- (8) No. 25.—Amending the Basutoland Trading Proclamation (No. 30 of 1918) so as to permit native residents in Basutoland to trade in certain articles without a licence.
- (9) No. 26.—Insolvency Proclamation, 1927.
- (10) No. 33.—Income Tax Proclamation, 1927.
- (11) No. 34.—Appropriation Proclamation, 1927.
- (12) No. 36.—Customs Management and Tariff (Amendment) Proclamation, 1927.
- (13) No. 43.—Increasing the rate of duty imposed on wool and mohair from one farthing to one half-penny per pound.

R. M. BOSWORTH SMITH,  
*Government Secretary,  
Basutoland.*

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No. 1386.

GOLD COAST

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REPORT FOR 1926—27

(For Report for 1924-25 see No. 1287 (Price 2s. 3d.)  
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Printed in the Gold Coast Colony

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# ANNUAL GENERAL REPORT

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## PREFATORY NOTE.

The Gold Coast Colony, with Ashanti, the Protected Northern Territories, and the British mandated territory of Togoland, is situated on the Gulf of Guinea, between  $3^{\circ} 7'$  W. long. and  $1^{\circ} 14'$  E. long., and is bounded on the west by the French colony of the Ivory Coast, on the east by the French mandated territory of Togoland, on the north by the French Soudan, and on the south by the sea.

The area of the Colony is 23,490 square miles, of Ashanti, 24,560, of the Northern Territories, 30,600, and of the British mandated territory of Togoland, 13,040.

The Colony is inhabited by a large number of native tribes, whose customs and forms of government are of a more or less similar character. Each tribe has its own head chief and every town or village of the tribe a chief or headman.

The head chiefs and chiefs form the council of the tribe, and assist in dealing with matters affecting its general welfare. The succession to the chiefs' stools is for the most part hereditary by the female side, the heir to the stool being the son of the occupant's eldest sister, or, failing male offspring by his sisters, his brothers according to seniority, and back from them to the male offspring of his aunts on the father's side.

The principal sea coast tribes are the following :—Apollonia, Ahanta, Shama, Komenda, Elmina, Cape Coast, Fanti, Winneba, Assin Gomoa, Ga, Adangme, Awuna, Agbosome and Afiao.

In the interior of the Colony the principal tribes are :—Aowin, upper and lower Wasaw, Sefwi, upper and lower Denkera, Tufel, Assen, Esikuma, Adjumako, Akim Abuakwa, and Akim Kotoku, Akwapim, Eastern and Western Krobo, Akwamu, Krepi, Shai and Ningo.

A number of different languages and dialects are spoken, the principal being Twi, Fanti, Awuna and Ga ; but the use of English is widespread.

For the purposes of administration the Colony is divided into three Provinces, each presided over by a Provincial Commissioner. These Provinces are further divided into districts, presided over by District Commissioners. Most of these officers perform judicial duties as magistrates in addition to being in administrative charge of their districts. The districts are as follows :—

1. Western Province :—Districts—Axim, Ankobra, Tarkwa, Sekondi-Dixcove, Sefwi and Aowin.
2. Central Province :—Districts—Cape Coast, Saltpond, Winneba, Western Akim.
3. Eastern Province :—Districts—Accra, New Juaben, Akwapim, Volta River, Keta-Ada, Birim, (Akim-Abuakwa), Birim, (Kwahu), Ho (Togoland).

It is said that as early as the reign of Edward I. (1272-1307) English navigators made voyages to the Gold Coast, and that a hundred years later French adventurers reached the coast, who, about 1364, built several lodges or forts, one being at Elmina, parts of which are supposed to have been subsequently incorporated in present castle there. No definite evidence however exists to support these claims, although it is quite possible they are both correct ; indeed, the natives until quite recently used to point out a hill near Takoradi as the site of a French fort built there many years ago. For our earliest knowledge of the Gold Coast we are indebted to the Portuguese navigators of the later years of the 14th and first part of the 15th centuries. They had been slowly extending their voyages down the West Coast of Africa, and it is recorded that in 1471 Juan de Santerem and Pedro d'Escobar traded for gold in the neighbourhood of Elmina or Chama. They made the first European settlement eleven years later, when an expedition under Diego d'Azumbuja built and garrisoned the fort San Jorge da Mina (Elmina), the materials for which he brought with him from Portugal. Several other settlements were founded, and the country was claimed for the King of Portugal by virtue of a Papal Bull granted in 1430, which gave to Portugal all the islands already discovered and all future discoveries in Guinea. This Bull was confirmed a few years after the foundation of Elmina by Pope Sixtus IV. The Portuguese remained in undisputed possession for over fifty years until British merchant adventurers commenced trading on the coast, the earliest voyages of which records remain being those of Thomas Windham and Antonio Anes Pinteado, in 1553, John Lok, in 1554, and William Towrson, in 1555, 1556 and 1558. The British made no settlements at this time and their trade soon lapsed altogether until the early years of 17th century. The Dutch, however, who made their first appearance on the coast in 1595, rapidly became serious rivals of the Portuguese and practically terminated their occupation by capturing Elmina in 1637, and Fort St. Anthony at Axim in 1642. After the activities of the Elizabethan sailors and merchant companies had come to an end, the English connection with the Gold Coast was by the efforts of a series of merchant companies, the first of which, called the " Company of Adventurers of London trading into Africa " was founded in 1618, but did not enjoy a successful career. Another company was formed in 1631, which established the first British fort on the coast at Kormantin, and lodges at several other places, This company was engaged in the slave trade, as were also the other

European nations. Its charter was renewed in 1651, but in 1661 a new company was incorporated as the "Company of Royal Adventurers of England trading to Africa." Settlements were formed at Anomabu, Accra, and at Cabo Corso (Cape Coast), at which place the castle was built about this time by the English, although the Portuguese probably had a lodge there earlier. Three other European nations succeeded in acquiring territories on the Gold Coast, *viz.* :—The Swedes, the Brandenburgers, and the Danes. The first-mentioned built the fort of Christiansborg, near Accra about 1645, but were driven out by the Danes in 1657, and retired from the Coast. The Brandenburgers established "Fort Great Fredericksburg" at Prince's River in 1682, and "Fort Dorothea" at Akwida in 1682, but their enterprise does not seem to have been prosecuted with much vigour, and was finally abandoned in 1720, their possessions falling into the hands of the Dutch. The Danes, however, after first selling the fort at Christiansborg to the Portuguese, and re-buying it three years later, rapidly improved their position, building forts at several stations to the East of Accra, as far as Ada and Keta, and exercising a kind of Protectorate over Akwapim, and the Volta River district.

The third English Company was not successful. The Dutch traders spared no efforts to get rid of their rivals, and in consequence of their aggression, an expedition was sent by Charles II. in 1664 under the command of Captain Holmes, which recaptured Cape Coast, taken the previous year by the Dutch, and all the other Dutch forts, with the exception of Elmina and possibly Axim. In the following year, however, the Dutch Commander de Ruyter recaptured all the lost Dutch forts, with the exception of Cape Coast; and the treaty of Breda, 1667, left affairs in the Gold Coast in this condition. The fourth English Company was incorporated in the year 1672 under the name of the "Royal African Company of England." Under its influence English interests steadily advanced, and forts were established at Dixcove, Sekondi, Komenda, Anomabu, Tantamkwari, Winneba, Accra. The abolition of the exclusive privileges which the Royal African Company enjoyed, led to its decline and eventual dissolution in 1752. By the Acts of Parliament 23 George II., c. 31, and 25 George II., c. 40, a fifth trading Corporation called the "African Company of Merchants" was formed, the membership of which was open to all British traders on payment of a fee of 40/-, compensation being paid for its charter and property to the Royal African Company. An annual subsidy was granted by Parliament to the newly-formed Company, until 1821, when by the Act 1 & 2 George IV., c. 28, the Company was dissolved and its possessions vested in the Crown, and placed under the Government of the West African Settlement, the seat of government being at Sierra Leone.

In 1824, the Governor of Sierra Leone, Sir Charles Macarthy, on visiting Cape Coast Castle, found the neighbouring country of the Fantis in possession of the Ashantis. He formed the resolution of inciting the Fantis against their oppressors, and led an army of them,

with a few disciplined soldiers, against the Ashantis at Insamankow where, on the 24th January, 1824, he was killed, and his force totally routed. The war which ensued was ended by the victory of the English at Dodowa, near Accra, in 1826. Peace was formally concluded by a tripartite Treaty in 1831, between the English, the Fantis, and the Ashantis.

In the meantime, Her Majesty's Government had inclined to the policy of retiring from the coast altogether, and after the peace they actually transferred the government of the forts to the local and London merchants interested, who secured as their Governor, Mr. George Maclean, a man of marked energy and capacity. This gentleman, with a force of no more than 100 men at command, and with a Government subsidy of only £4,400. a year, contrived to extend and maintain the influence of his Government over the whole tract of country now known as the Gold Coast. In 1843, it having been suspected that the Merchant Government connived at the slave trade, the forts were resumed by the Crown, and a Lieutenant-Governor was appointed. Mr. Maclean was continued in the direction of native affairs, under the title of Judicial Assessor to the Native Chiefs, which post he held until his death in 1847.

Hitherto the forts of the various nations were intermixed with each other, and there was no defined limit as to where the influence of one or the other began or ended. The imposition of Customs duties was rendered difficult, if not impossible, by the existence of the free ports of a rival nation within a stone's throw, as it were, of the duty ports. On the 24th of January, 1850, by Letters Patent, the Settlements on the Gold Coast ceased to be dependencies of Sierra Leone, and in the same year, by the purchase of the forts and protectorate of the Danes, the Coast line from Christiansborg to Keta and the districts of Shai, Eastern and Western Krobo, Akwapim, Akwamu, and Krepi, were acquired by England. By a Commission dated the 19th February, 1866, the Gold Coast Settlements were reunited to the Colony of Sierra Leone under one Governor-in-Chief. In 1867, a convention was made with the Dutch by which the portion of the Coast lying to the west of the Sweet River, which flows into the sea between Cape Coast and Elmina, was allotted to Holland, England taking all the territory to the east of the river, and a customs union between the two nations was established. The Dutch, however, found many difficulties in the way of their occupation of the forts and possessions received from the English in exchange for those of their own lying to the East of the boundary line. The native tribes refused to recognise their authority, and the prospect before them was that of a long series of petty wars with no reasonable hope of profit to be gained in the future. The result was the convention made between England and Holland in 1871, by which the Dutch transferred all their forts and possessions on the Coast to the English and Great Britain obtained at last the sole sovereignty and control of the territory from Half-Asinie to Afiao. The forts were transferred on the 6th of April, 1872. The present extent and limits of the colony are defined in the Order in Council of 1906.

At the conclusion of peace in 1874, measures were taken for placing the government of the Gold Coast upon a footing of efficiency and security.

A new charter was issued, dated the 24th of July, 1874, separating the settlements of the Gold Coast and Lagos from the government of the West African Settlements, and erecting them into one colony under the style of the Gold Coast Colony, under a Governor-in-Chief, with an Administrator at Lagos. There was one Executive Council and one nominated Legislative Council for the two settlements and one Supreme Court. The charter of 1874 was superseded by Letters Patent dated the 23rd of January, 1883, and 13th January, 1886, respectively. By the latter instrument Lagos was separated from the Gold Coast and formed into a distinct colony. Provision was made for an Executive and Legislative Council, the members of both being nominated by the Crown. Four unofficial members were appointed to the Legislative Council.

By Royal Instructions dated 20th September, 1916, under Letters Patent of the same date, all previous Instructions were revoked and the Executive and Legislative Councils were re-constituted. The Executive Council was constituted by the Colonial Secretary, the Attorney-General, the Treasurer, the Director of Medical and Sanitary Services, and the Secretary for Native Affairs with the Governor as President. The Legislative Council was constituted by the members of the Executive Council and, in addition, the Comptroller of Customs, the Director of Public Works, the General Manager of Railways, and the Commissioners of the Eastern, Central and Western Provinces, as ex-officio members, and such unofficial members as might be appointed by the Crown. By an Order in Council dated 8th April, 1925, Letters Patent and Royal Instructions dated 23rd May, 1925, the Legislative Council was reconstituted. It is now composed of the Governor, fifteen Official Members and fourteen Unofficial Members. The newly-constituted Legislative Council for the first time contains an elective element; provision having been made for the election of six Head Chiefs as Provincial Members of the Council, three Municipal Members to represent the towns of Accra, Cape Coast, and Sekondi, respectively, a Mercantile Member, and a Mining Member. In the case, however, of the Municipal Members and of the Mining Member the elective procedure is temporarily in abeyance.

The currency in use consists of British Bank and Treasury notes and coin, all of which are legal tender as well as West African Currency Notes (value £1 and 10/-) and Coin (value 2/-, 1/-, 6d., 3d., 1d., ½d., 1/10d.). The English system of weights and measures is followed.



## CHAPTER 1.—GENERAL.

I. The Gold Coast\* continues to enjoy an era of prosperity, and this prosperity was marked during the year 1926–1927 by a considerable increase in both Imports and Exports. The total value of external trade in the year under review was £22,390,676 compared with £20,672,842 in 1925–26. The value of exports exceeded that of imports by £1,818,924, while the total revenue of £4,365,321, the highest on record in the history of the Colony, exceeded recurrent and extraordinary expenditure by £815,879.

2. This satisfactory result is mainly attributable to the exports of Cocoa, the staple product of the country, the value of which amounted in 1926–27 to £9,181,235 compared with £8,222,263 in 1925–26. The Government is taking steps with a view to developing the export trade of the Colony in other directions.

3. The chief political event of importance in the Gold Coast during the year under review was the coming into operation of the new constitution of the Legislative Council, conferred upon the Gold Coast Colony by the Order of the King in Council dated the 8th April, 1925. On the 15th April, 1926, the necessary Electoral Regulations under the Royal Order-in-Council were made, laying down the procedure for the election of Provincial, Municipal, Mercantile and Mining Members. On the same date two other Orders were made, declaring respectively the recognised Chambers of Commerce for the election of the Mercantile Member and the recognised Head Chiefs for the establishment of the three Provincial Councils.

4. The European Mercantile Member was duly elected. The Chamber of Mines did not avail itself of its right to elect, but preferred that the Mining Member should be nominated. All three Municipal Members had to be nominated, owing to the condition attached to the grant of the franchise to the towns of Accra, Sekondi and Cape Coast, *viz.* that the Members for those towns shall be nominated until the municipalities are placed under the Municipal Corporations Ordinance.

5. The three Provincial Councils first met on the 17th of May, 1926, for the purpose of the election of Provincial Members. In the Western Province eight, out of a total of twenty, Head Chiefs met at Tarkwa but did not elect a representative to the Legislative Council. In the Central Province eleven Head Chiefs, out of the twenty-two whose Divisions were at the time qualified to send representatives to the Provincial Council, met at Dunkwa and elected the two Members for the Legislative Council to which this Province is entitled. In the Eastern Province out of twelve Divisions qualified for representation on the Provincial Council there was only one abstention, and the Council elected the three Members to which it is entitled.

---

\*Gold Coast includes the Gold Coast Colony, Ashanti and the Northern Territories

Five out of the six Provincial Members having thus been elected, the Acting Governor nominated one Head Chief to complete the number.

7. The first meeting of the newly-constituted Council which consists of fifteen Official and fourteen Unofficial Members of whom nine are Africans and five Europeans, took place on the 30th August, 1926; and was presided over by the Acting Governor, Sir James Crawford Maxwell, K.B.E., C.M.G.

8. A measure of great importance to the people of the Colony and Ashanti, which has for its object the conservation of the forest of the Colony and Ashanti, and the constitution of Forest Reserves without interfering with the ownership of land within a Forest Reserve, was passed towards the close of the year.

9. On the 19th July, 1926 the Gold Coast Commercial Intelligence Bureau was opened in London under the directorship of Lieutenant-Colonel J. H. Levey, D.S.O., O.B.E., at Abbey House, 8 Victoria Street, London, S.W. 1.

The main object of the Gold Coast Commercial Intelligence Bureau is to provide a centre in London at which enquirers can be given reliable and up-to-date information on all subjects—commercial, agricultural, mining, etc.—connected with the development of the country; at which the official publications of the Government—ordinances, gazettes, maps, departmental reports, etc.—can be consulted and purchased; and where selected specimens of the products of the Colony can be inspected.

The Bureau is able to advise manufacturers what prospects there are of the classes of goods they manufacture obtaining a sale in the Colony, and both manufacturers and merchants what means they should adopt to place goods.

The Bureau has full information respecting the railways of the Colony (including railway rates), roads, motor transport, harbours, posts and telegraphs, labour available, and rates of pay, etc.

Inquirers can also be given general information as to the procedure to be followed in obtaining land for either commercial or agricultural purposes.

Newly appointed officials can obtain information as to kit, passages, procedure on arrival in the Colony, and any general information required.

10. The Honourable W. G. A. Ormsby-Gore, M.P., Under Secretary of State for the Colonies, accompanied by the Honourable C. A. U. Rhys, M.P., and Mr. J. E. W. Flood and Mr. A. Bevir of the Colonial Office, arrived at Accra from Nigeria on the 20th March, 1926. The first ten days were devoted to conferences in Accra with officials and non-official deputations, and during this period Mr. Ormsby-Gore paid a visit to British Togoland.

Between the 27th March and the 5th April Mr. Flood visited the Northern Territories, making a complete circuit from Kumasi via Yeji, Tamale, Navoro, Lorha, Wa, Kintampo, and Sunyani, and back to Kumasi, where he rejoined Mr. Ormsby-Gore. The latter with the remainder of the party motored on the 1st April from Accra via Aburi, Mampong, Koforidua and Kibi to Bosuso where they entrained for Kumasi. From the 3rd to the 6th of April Mr. Ormsby-Gore visited various places in Ashanti, and on the 7th and 8th journeyed by train to Sekondi, visiting the gold mines at Obuasi and Aboso and the manganese mines at Nsuta *en route*. On the 9th he visited Takoradi Harbour Works and the Scysie palm oil plantation, while on the 10th Mr. Rhys, Mr. Flood, and Mr. Revir visited Cape Coast. On the 11th of April the whole party embarked at Sekondi for Sierra Leone. A report of the Under Secretary of State's visit to West Africa, which was presented to Parliament in September, 1926, has been published.

II. An outstanding political event, so far as the Colony proper was concerned, was the introduction into the Legislative Council of the Native Administration Bill, which was read a first time on 3rd March, 1927.

The Bill is intended to consolidate the law at present existing with regard to Native Administration and Jurisdiction, and repeals the following Ordinances: The Chiefs Ordinance, Chapter 80 of the Laws of the Colony; The Stool Property Detention Ordinance, Chapter 81; The Native Jurisdiction Ordinance, Chapter 82; The Native Prisons Ordinance, Chapter 84; The Native Jurisdiction Amendment Ordinance, No. 10 of 1924 and the Provincial Councils (Further Provisions) Ordinance, No. 15 of 1927-

An important provision in the Bill, the introducer and seconder of which were Paramount Chiefs, is that by which the Provincial Councils created by "The Gold Coast Colony (Legislative Council) Order in Council, 1925," are given jurisdiction to decide disputes of a constitutional nature between two or more Paramount Chiefs, or two or more Divisional Chiefs of the different States in the Province.

Provincial Councils also have power to decide disputes relating to the ownership, possession or occupation of lands or to jurisdiction, arising between two or more Paramount Chiefs or between two or more Divisional Chiefs of different States in the Province. In the case of disputes relating to land an appeal will lie to the Full Court of the Supreme Court of the Colony, providing that notice of such appeal is given within six months of the delivery of the judgment.

Where Paramount or Divisional Chiefs of States belonging to different Provinces are in dispute the matter is to be decided by the Provincial Councils of each Province sitting jointly.

The Bill also gives the Governor power to refer any question, matter or dispute to a Provincial Council for hearing and determination.

Provincial Councils as constituted under "The Gold Coast Colony (Legislative Council) Order in Council, 1925," were in being in the Eastern and Central Provinces at the close of the year but none had yet been formed in the Western Province.

One of the main duties of the Provincial Councils will be to act in an advisory capacity to the Government in matters of Native Custom and Customary Law.

The Native Administration Bill was received with some opposition mainly from the educated classes residing in the coast towns, whose fear appeared to be that too much power was being placed in the hands of the Chiefs. It is hoped however that this opposition will die down, as the people realize the very genuine step forward on the road towards self-Government which its introduction marks.

12. In Ashanti the outstanding event was the installation as Kumasihehe or Head Chief of Kumasi of Prempeh, the ex-King of Ashanti, who after 30 years of exile in the Seychelles was permitted to return to Ashanti as a private person in 1925. This installation involved the abolition of the Kumasi Council of Chiefs which for over 20 years had faithfully and well advised the Government on matters appertaining generally to the welfare of Ashanti.

13. In the Northern Territories, there occurred no political feature of outstanding importance, but the Chiefs and people continued loyally to co-operate with the Government and it is but just to add, that fewer serious disputes either between Chiefs themselves or Chiefs and their people occur in that Territory than in other parts of the Gold Coast.

14. A visit of far-reaching importance was made to the Gold Coast by Professor Diedrich Westermann. Hitherto the various vernacular languages have been reduced to writing by the efforts of various unconnected missionary bodies. Each has used its own system of orthography, and published its own text books, from which its own pupils have been taught, with the result that Africans of different tribes who can converse fluently with each other are often quite unable to communicate in writing except through the medium of English. Professor Westermann, on account of his acknowledged pre-eminence as a scholar of Gold Coast languages, was invited by Government to undertake the production of a script which would be common to all the languages and dialects without unduly differing from the scripts already in use. This difficult task, in which the local Missions united in giving enthusiastic support, has, it is believed, been successfully accomplished, such opposition as existed having generously yielded to the demands of the public interest.

15. The Government of the Gold Coast was administered by the Governor and Commander-in-Chief, Brigadier-General Sir Frederick Gordon Guggisberg, K.C.M.G., D.S.O., from the 1st of April to the 10th of April, 1926, and during his absence on leave, by Sir James Crawford Maxwell, K.B.E., C.M.G., Colonial Secretary, from the 11th of April, to the 27th of September, 1926. On the 28th of September, 1926, the Governor resumed the administration of the Government until the end of the financial year.

16. The following Honours were conferred by His Majesty the King:—

Edgar Wrigley Cozens-Hardy, Esquire, General Manager Government Railways, to be a Companion of the Most Distinguished Order of Saint Michael and Saint George.

Henry James Hobbs, Esquire, Provincial Commissioner, to be a Companion of the Imperial Service Order.

John Dewar McKay, Esquire, an Unofficial Member of the Legislative Council, to be an Officer of the Most Excellent Order of the British Empire.

The Rev. Arthur Wilkie, Secretary, Scottish Mission, to be a Commander of the Most Excellent Order of the British Empire.

Albert Ernest Kitson, Esquire, C.M.G., C.B.E., Director, Geological Surveys, to be a Knight Bachelor.

17. The total European official establishment of the Colony and its Dependencies during the financial year was 1,046.

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## CHAPTER II.—FINANCE.

*Note.*—The financial year is from 1st April to 31st March.

1. The revenue and expenditure for the past five years are as follows :—

				Revenue.		Expenditure.
				£		£
1922—23	..	..	..	3,357,196	..	2,934,994
1923—24	..	..	..	3,742,834	..	4,105,938 (a)
1924—25	..	..	..	3,971,187	..	4,632,633 (b)
1925—26	..	..	..	5,871,556 (c)	..	4,255,126
1926—27	..	..	..	4,365,321	..	4,328,159

(a) Includes Special Expenditure out of Surplus Balance of £257,179 and advances to Loan Works from the same source of £950,814 ;

(b) Includes Special Expenditure out of Surplus Balance of £466,722 and advances to Loans from the same source of £804,300 ;

(c) Includes £1,755,114 refunded from Loan Funds.

2. The excess of assets over liabilities shown in the Balance Sheet on 1st April, 1926, was £2,493,668. The excess of assets over liabilities on 31st March, 1927, was £2,026,634, thus showing a decrease of £467,034. The sum of £600,932 is standing to the credit of the Reserve Fund, and £504,195 was transferred to the credit of the Supplementary Reserve Fund during the year.

3. On the 31st March, 1927 the amount of the Public Debt was £11,791,000.

4. The Sinking Fund for the amortization of the funded portion of the Public Debt was increased during the year by £173,035, made up of £134,335 from general revenue and £38,700 from interest on investments. The amount standing to the credit of the fund on the 31st March, 1927 was £929,976.

5. Excluding the investments on account of the Sinking Fund, the investments held by Government on the 31st March, 1927, in respect of Surplus Funds and Special Funds, amounted to £1,195,751, and a sum of £2,761,000 was on deposit or lent at interest by the Crown Agents.

6. £5,000, an amount which is sufficient to cover the depreciation of old investments (at pre-war rates of interest) on account of the Savings Bank, stands to the credit of the Investments Depreciation Account.

**CHAPTER III.—PRODUCTION.****Agriculture.**

1. The Gold Coast maintained its position as the premier cocoa growing country in the world, producing about one-half of the world's supply of cocoa. The primary duty of the Agricultural Department is to foster and protect this product. An Ordinance has been passed to facilitate this object.

2. No cocoa is grown in the Northern Territories which are climatically unsuited to this crop.

**Kola Nuts.**

3. There is a reduction in the export of this crop which may be accounted for by an increase in the amount going inland owing to improved transport facilities. There is no indication that the crop was below average.

**Copra.**

4. There was an increase of 189 tons over last year in the export of copra. Almost the whole of the export was from Keta and whilst there is an awakening of interest in the cultivation of coconuts in the Colony, it takes several years for palms to come into bearing and in addition there is a considerable local demand for nuts to be met. The manufacture of copra for export is as yet almost non-existent except in the extreme east of the coastal belt.

**Rubber.**

5. Exports of rubber amounted to 1,418,250 lbs. in 1926 compared with 1,097,832 lbs. in the previous year, an increase of 320,418 lbs with an increased value of £19,527.

**Cotton.**

6. 20,203 lbs. of cotton lint were exported against 4,416 lbs. in 1925 an increase in quantity of 15,787 lbs and £382 in value.

**Food Crops.**

7. In general, food crops were plentiful and in some areas above the average.

**Sisal.**

8. The output of the factory was 456 tons of fibre as against 176 tons in the previous year.

9. Statistics of export of agricultural produce are given in paragraph 14 of Chapter IV, Trade and Economics.

### Veterinary.

10. The veterinary activities of Government are carried on entirely in the Northern Territories where a Veterinary Department is established with a staff of a Principal Veterinary Officer, five European and five African Veterinary Officers and a European Inspector of Livestock.

11. There is a Veterinary School at Tamale where young Africans may qualify as graduates in four years. Graduates are employed by Government.

12. The functions of the Veterinary Department are:—

- (a) To guard the indigenous stock and imported livestock caravans from contagious and infectious disease;
- (b) To suppress any such outbreaks when they occur;
- (c) To instruct the stock-owners in practical Zootechny;
- (d) To improve the indigenous breeds of livestock;
- (e) Treatment of sick domestic animals;
- (f) Research work in connection with animal diseases and feeding of livestock;
- (g) Breeding experiments;
- (h) To collect the Import Tax on livestock.

13. The cattle trade is mainly in the hands of Africans, but a number of French and Syrians also participate. The cattle come from French country to the North of the Gold Coast and are brought down on the hoof along well-defined caravan routes and sold at distributing centres in the North for breeding and in the South for slaughter.

14. An import tax of 5s. per horse, 4s. per head of cattle and 6d. per sheep or goat was introduced from the 1st of April, 1926.

15. There are five Quarantine Stations on the frontier for imported livestock. The period of quarantine for cattle is nine days and for other stock one day.

16. The Veterinary Department is attempting to improve the native stock by the importation of pure-bred stock from England. They are crossed at a Government stock farm at Tamale and the half-bred progeny is issued to Chiefs and other stock owners. Most successful results have been obtained from cattle, pigs and poultry.

17. A Live-stock Show was held at Navrongo, but owing to the prevalence of cattle plague, all classes for cattle had to be closed.



18. Outbreaks of cattle plague have occurred throughout the year. 1,981 head of cattle died and 837 recovered and were branded as immune. Nearly 5,000 cattle were inoculated by the Serum Alone Method. The Sero-vaccine Method was also used.

19. Pleuro-Pneumonia, Anthrax, Foot-and-Mouth Diseases and Trypanosomiasis occurred, but not in serious proportions.

### Forestry.

20. Although mahogany stands sixth in value of the exports of the Gold Coast the activities of Government in the matter of Forestry are directed mainly towards the conservation of the forest areas with a view to preserving the humidity of the soil for the production of cocoa. With this object Government is establishing Forest Reserves, and during the year a special Forestry Ordinance was passed into law.

21. Some progress has been made during the year, not so much in the actual constitution of Forest Reserves under Chiefs' bye-laws, but in the preliminary demarcation of proposed reserves, several of which are waiting for the final survey.

22. The situation is as follows :—

Government aims at reserving an area of 6,000 square miles. 307 square miles have already been reserved, and 744 square miles in addition have been surveyed or demarcated but are not yet reserved. An additional 238 square miles have been selected and are ready for demarcation.

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**CHAPTER IV.—TRADE AND ECONOMICS.**

THE TRADE FIGURES IN THIS CHAPTER ARE IN RESPECT OF THE CALENDAR YEAR 1926.

**Customs Revenue.**

1. The gross revenue receipts for the year amounted to £2,244,629 being £287,182 less than the gross receipts for 1925.
2. The decrease in gross revenue receipts was mainly due to the reduction of all ad-valorem rates of duty to 10 per cent on 22nd of February, 1926. Receipts from ad-valorem duties fell from £633,290 in 1925 to £332,140 in 1926.
3. Specific duties provided 71.01 per cent of the net receipts. The proceeds under this head amounted to £1,587,918 or £13,078 less than the receipts from the same source in 1925.
4. The duties on wines, spirits and malt liquors for the year under review totalled £1,027,155 and represents 45.93 per cent of the net receipts.

**Imports.**

5. The value of all imports for the year amounted to £10,285,876 being an increase of £503,257 compared with the 1925 value of imported articles and over £2,600,000 in excess of the value of imports in 1921.
6. The value of imports subject to ad-valorem duty was £319,112 less than the value of similar imports in 1925. The articles responsible for the decrease were cotton goods, haberdashery and millinery, and iron and steel manufactures—principally structural steel and iron work and enamelled ware. The coal strike in England delayed the execution of indents for new cotton goods, and it is probable that certain of the larger firms in the Colony carried fairly large stocks of cottons at the commencement of the year. The only articles that showed substantial increases over 1925 were manufactures of silk and artificial silk.
7. The value of the 1926 imports of goods subject to specific duty, other than spirituous liquors, was £30,899 in excess of such imports for the previous trade period. The item that chiefly contributed to the increase was motor spirit, the demand for which was stimulated by additions to the mileage of motorable roads.
8. The value of imports of spirituous liquors was greater by £3,874 than in 1925, due to the growing regard for quality on the part of consumers whose standard of living is steadily rising. The most noteworthy article contributing to the increase is under the heading Beer and Ale, Stout and Porter, the quantity imported during the year being nearly double the quantity imported in 1925. Lager Beer in particular is rapidly increasing in popularity, and

largely at the expense of the established position which geneva has held as the favourite beverage. The reduction in the import duty on beer to one shilling per gallon made it possible for good lager beer to be retailed at a shilling per bottle. At this price there is a ready demand, but sales decline if more than a shilling is charged.

9. Appreciable decreases occurred in the importation of gin and canned fish. There are indications that geneva is gradually coming to be regarded as 'a poor man's drink,' and one of the first manifestations of comparative affluence is the substitution of beer or wine as a beverage. The decrease in canned fish and meats is offset partly by the fresh supplies obtained from cold storage and partly by increased importations of dried and salted fish.

10. The imports of commercial free goods were greater by £941,547 than in the previous year, but this increase must very largely be attributed to the increased importation of specie to meet the higher level of prices ruling for cocoa during the marketing of the main crop.

11. Other imports exempt from duty which showed an increase in value were, in order of importance, tyres for vehicles, coal, coke and patent fuel, motor cars and lorries, electrical and telegraphic apparatus and bags and sacks. The constant addition to the mileage of motorable roads in the Gold Coast has naturally been accompanied by increased importations of motor vehicles and tyres. The development of Takoradi Harbour and the Railways called for additional imports of coal. Extensions of the telegraphic and telephonic services were the main cause of the increase under the head of electrical and telegraphic apparatus, and the increase in bags and sacks was due to the heavy requirements for the main cocoa season. The principal decreases in the articles exempt from duty were railway rolling stock, corrugated iron sheets, ships and boats (not mechanically propelled) and agricultural implements.

**Exports.**

12. The total value of the exports for the year ended 31st December, 1926, amounted to £12,104,800, being £1,214,577 or 10.03 per cent in value greater than the exports for 1925.

13. The value of the exports of domestic produce and manufactures, excluding bullion, was in excess of that for the previous year by £1,212,897 or 11.02 per cent which the value of cocoa was the principal factor.

14. The following table shows the principal articles of domestic produce which showed increases or decreases compared with the exports of similar produce in 1925 :—

Article.	Quantity.		Value.		Increase or Decrease.	
	1925.	1926.	1925.	1926.	Quantity.	Value.
Cocoa...	218,151	230,840	8,222,263	9,181,235	+12, 89	+958,972
Diamonds ..	77,313	299,835	98,760	362,833	+222,522	+264,073
Rubber ..	1,097,832	1,418,250	33,946	53,473	+320,418	+19,527
Fibre (Sisal hemp) ..	170	456	6,995	18,193	+280	+11,198
Palm Kernels ..	6,569	7,659	115,257	125,556	+1,090	+10,299
Raw Gold ..	218,122	219,999	840,525	850,042	+1,877	+9,517
Palm Oil ..	1,423	1,752	43,624	52,283	+329	+8,659
Manganese Ore ..	338,657	344,933	680,944	684,852	+6,276	+3,908
Copra... ..	1,324	1,513	30,704	33,482	+189	+2,778
Kola Nuts ..	13,656,162	12,474,028	282,773	259,479	-1,182,134	-23,294
Mahogany ..	2,016,755	1,880,456	256,634	213,928	-136,299	-42,706
Ivory ..	3,891	4,495	1,189	1,236	+604	+47
Cotton Lint ..	4,416	20,203	185	567	+15,787	+382

15. The exports of raw cocoa, including 4,918 tons exported by land and inland navigation, amounted to 230,840 tons and represented a value of £9,181,235. This is the greatest tonnage of cocoa that has yet left the Gold Coast in a calendar year. Compared with 1925 the increases in quantity and value were respectively 12,689 tons and £958,972.

16. The price of cocoa evinced an upward tendency in October, 1926, and at the close of the year the London spot price for fine fermented Accra cocoa had reached £70 per ton. This remarkable rise in price ensured a more thorough reaping of the farms, even of those not favourably situated for mechanical transport; but the extent of the increase in tonnage exported also indicates that new areas have come into bearing. The extension of telegraph and telephone lines has had a direct effect on the price received by the farmer for his cocoa. These means of rapid communication, together with the keen competition between local buyers now ensure to the farmer a return based on the latest market prices in Europe and the United States of America.

17. The countries to which exports of cocoa were consigned in 1926 were as follows :—

Country of Destination	Quantity. Tons.	Value. £
United States of America .. ..	65,202	2,583,881
Germany .. ..	51,920	2,059,483
United Kingdom .. ..	46,699	1,914,541
Holland .. ..	38,715	1,577,486
France .. ..	14,955	594,065
Other Countries .. ..	13,349	451,779
<b>Total .. ..</b>	<b>230,840</b>	<b>9,181,235</b>

18. The rapid development of the diamond industry is especially noteworthy, the output of the mines being nearly quadrupled during the year. The increase of 320,418 lbs. in the quantity of rubber exported is clear indication of the interest being taken in the cultivation of the product.

19. The relatively small increase of 6,276 tons in the exports of manganese ore was not unexpected in view of the serious congestion at the port of Sekondi where the ore is shipped. To those acquainted with the conditions prevailing at that port it is a matter for surprise that 344,933 tons could have been put on board during the year. There can be little doubt that when the port of Takoradi is open there will be a marked expansion in the shipment of this

ore. The Government Sisal Plantation near Accra made good progress during the year, exporting 456 tons of sisal hemp valued at £18,193. The introduction of improved machinery has enabled the plantation to market fibre of first grade quality.

20. Among the minor exports palm kernels, palm oil, copra and cotton all showed an improvement. The fact that these products received greater attention during a year in which a record tonnage of cocoa was exported is distinctly encouraging in view of the frequent warnings against the danger of placing too much reliance upon the country's chief agricultural product.

21. For the second year in succession there was a decrease in shipments of kola, maritime exports falling from 13,656,162 lbs. in 1925 to 12,474,028 lbs. in 1926. It is probable that unfavourable weather was the main cause of this decrease but increased exports overland to Nigeria *via* the Northern Territories may also have contributed to it. Nearly all the kola shipped from Gold Coast ports is consigned to Nigeria, where it is meeting with increasing competition from kola exported by Sierra Leone.

22. Exports of mahogany were less by 136,299 cubic feet than in 1925. Prices on the whole were not so attractive as in the previous year, and there was a shorter flood season in which to float logs down the rivers to the sea. Raw gold exports totalled 219,999 ozs. valued at £850,042, an increase of 1,877 ozs. in weight and £9,517 in value.

### Direction of Trade.

23. The import trade with all parts of the Empire represented 67 per cent of the total import trade and is less by 0.75 per cent than similar trade for the year 1925. The share of the import trade appropriated by the United Kingdom was 55.85 per cent, being 9.43 per cent less than in the former year; a decrease for which the industrial disputes in Britain were in a great measure responsible. Imports from British West Africa rose to 9.31 per cent, an increase of 7.5 per cent on similar imports in the previous year. The articles contributing to this increase were farina, coal, lumber, native cotton goods and common soap. The United States of America, France and Germany all slightly increased their percentages of import trade with the Colony. Holland's share of the import trade, after increasing to 8.48 per cent in 1925, fell to 7.08 per cent in 1926, mainly owing to reduced importations of cotton goods, rice and gin. German imports largely consisted of gunpowder, beer, cutlery, matchets, sewing machines, enamelware, musical instruments and perfumery. The principal imports from France were aerated and mineral waters, perfumed spirits and wine. From the United States of America the chief imports were motor vehicles including spare parts and accessories, motor spirit, flour, kerosene, tobacco unmanufactured, pickled beef and pork and sugar (refined.)

24. Of the domestic exports the bulk of the cocoa crop was taken by the United States of America, Germany, the United Kingdom and Holland (see paragraph 17). The United Kingdom received all exports of gold bullion and diamonds. Most of the mahogany was shipped to the United States and practically all maritime exports of kola nuts were consigned to Nigeria. The manganese ore was chiefly shipped to Norway, the United States of America, Canada and the United Kingdom.

25. The bulk of the import trade is in the hands of Europeans, but Syrians and Indians and also natives of the Gold Coast participate. Imported goods reach the provinces through branch stores of which all the prominent firms have a large number up-country; while the population of outlying districts is supplied with the more easily portable articles by petty traders who buy from the importing firms and retail in the local native markets.

### **Mines.**

#### **Gold.**

26. The Gold Mining Industry appears to have reached its lowest ebb. Little improvement can be looked for next year but in the succeeding years a great and steady improvement may be expected with justification.

#### **Taquah and Abosso Consolidated.**

27. The Company which is working Abosso Mine, Adjah Bippo Mine and owns, and will probably work, Cinnamon Bippo Mine (three miles on the same continuous line of Banket deposit) is now in process of reconstruction and is preparing to install a complete new plant.  
**Abbontiakoon Mines Limited**

This mine, on the same line of Banket Reef as the Taquah and Abosso Consolidated, has lately been carefully examined and should the Company proceed to reconstruct, as is reasonably possible, the mine may be expected to do its share in increasing the bullion output.

#### **Prestea Block A.**

The property now owned by the Gold Coast Explorers is being reconditioned and may be expected to be in full production by the middle of 1928.

#### **Ashanti Goldfields Corporation.**

The property at Obuasi in Ashanti produced more gold during the year than all the other gold mines of the Gold Coast added together.

The production of gold from alluvial workings in the Gold Coast is very small and from dredging nil.

28. The mines producing on the Banket Deposit are, Taquah, Abbontiakoon, Abosso and Adjah Bipbo. The introduction of wet hammer machine drills into these mines is assisting to diminish the disabilities due to the shortage of underground labour, but by no means entirely solves the problem. The following mines are working on Quartz Reefs in the Colony-Prestea Block A, and Akoko Simpa Reefs has been abandoned for the present.

In Ashanti two mines are working on Quartz Reefs, the Ashanti Goldfields Corporation Mine at Obuasi and Lyndhurst Deep Levels Limited at Konongo.

Ashanti Goldfields have now reached level 22 where they have a fine body of ore carrying good values. This mine is easily first as a gold producer and dividend payer.

Lyndhurst Deep Levels ceased crushing during the latter half of the year and is exploring the lower levels of the mine, which have not developed as well as the upper levels.

### **Manganese.**

29. Ore exported reached its highest figure this year—all from the African Manganese Company at Insuta.

### **Diamonds.**

30. The export of Diamonds for 1926 was more than treble that of 1925. Two companies, the African Selection Trust and the West African Diamond Syndicate are the main producers, both working in the Birim Valley—the only locality in which, up to the present, Diamonds have been found in any quantity. The diamonds are very small—about 26 to the carat—but find a ready market.

### **Labour.**

31. The total number of Natives engaged in the Mineral Industry was 10,734 of whom 6,665 were employed on the surface and 4,069 underground. 269 Europeans were employed, 200 on the surface and 69 underground. No Natives were indentured from other Colonies and all labour was locally engaged.



## CHAPTER V.—COMMUNICATIONS.

## Shipping and Harbours.

1. There was an increase in the number and tonnage of shipping which entered and cleared during 1926 as compared with the former year. 867 vessels representing an aggregate registered tonnage of 2,407,509 tons entered the ports of the Colony during the year, and 865 vessels of a total registered tonnage of 2,406,927 tons cleared for overseas in the same trade period. In 1925 the vessels entered inwards totalled 760 vessels representing a registered tonnage of 2,090,805 tons and 757 vessels cleared outwards during the same period with a total registered tonnage of 2,090,345

2. The following table gives the nationality of shipping which entered the ports of the Gold Coast :—

	Steam and Motor Vessels.		Sailing Vessels.	
	Nos.	Tons.	Nos.	Tons.
British .. ..	464	1,346,612	—	—
French .. ..	103	299,326	—	—
American .. ..	40	136,859	1	1,107
Dutch .. ..	96	252,042	—	—
Norwegian .. ..	26	83,676	—	—
German .. ..	111	220,444	—	—
Italian .. ..	20	60,213	—	—
Swedish .. ..	2	2,367	—	—
Danish .. ..	4	4,863	—	—
<b>Total .. ..</b>	<b>866</b>	<b>2,406,402</b>	<b>1</b>	<b>1,107</b>

N.B. The above figures are in respect of the Calendar year 1926.

## Takoradi Harbour.

3. Good progress was made with the works during the year 1926-27. At 31st March, 1927, 7,134 lineal feet of the Main Breakwater, or 94 per cent of its length, was completed and 843,131 cubic yards of granite deposited, or 83 per cent of the estimated total volume.

4. Of the Lee Breakwater 3,861 lineal feet or 81 per cent of the total length was completed and 252,865 cubic yards of granite or 58 per cent of the estimated total volume deposited.

5. The West and North Lighter Wharves and the Timber Wharf are practically complete and a commencement has been made with the Main Wharf.

6. The Moorings and bow ends for ocean-going vessels have been completed with chains and buoys in position.

7. Practically the whole of the Reclamation Area west and north of the lighter wharves has been formed and a commencement has been made with laying out the permanent railway track in that area. The Railway Passenger Station is complete except for the concourse and platform roofs, the Goods Shed is practically complete and the Lighter Transit and Want of Entry Shed is complete except for the concrete floor and the internal partitions.

8. The junction of the Harbour Branch Line with the Gold Coast Railways Main Line has been made and 6 miles of permanent track and 16,000 cubic yards of ballast laid during the year. The Locomotive Shed and 70' diameter Turntable are complete.

9. A Powder Magazine and Guard Room have been built.

10. On 8th November, 1926, the first ship entered the harbour, the "Agnete Naerst", with a cargo of coal for the Contractors. Since that date vessels have frequently discharged materials, coal, cement, &c., for the contractors at Takoradi; in addition H. M. S. "Delphinium" and the American motor yacht "Utowana" have dropped anchor in the harbour.

11. A revised estimate of the total cost of Takoradi amounts approximately to three and a half million pounds.

### **Railways.**

12. The total mileage open for traffic at the close of the financial year 1926-27 was 475.

13. The main line runs in a northerly direction from the port of Sekondi to Kumasi in Ashanti, thence to Accra in a south-easterly direction, a total distance of 362 miles.

14. The Branch Lines (3' 6" gauge) operated from the Sekondi-Juaso Section are the Inchaban Branch which runs in an easterly direction taking off the main line at  $4\frac{1}{2}$  miles from Sekondi, and having a length of 4 miles; the Tarkwa-Prestea Branch which runs in a north-westerly direction taking off the main line at Tarkwa, 39 miles from Sekondi, and having a length of 18 miles; and the newly constructed Central Province Railway which runs in a north-easterly direction from Huni Valley, 53 miles from Sekondi, to Kade, a distance of 99 miles. The line from Huni Valley to Oda, 81 miles, was taken over by the Open Lines during the year.

15. The only Branch operated from the Accra-Juaso Section is the Weshiang Branch (2' 6" gauge) which runs from Accra in a westerly direction to Weshiang, a distance of 10 miles.

### Finance.

16. The total Capital Expenditure on the 31st March, 1927, stood at £8,297,938.

17. The gross revenue amounted to £1,156,453, an increase of £54,152 as compared with the gross revenue for the year, 1925-26.

18. The working expenditure including a contribution of £100,523 to the Renewal Fund in 1926-27 and £97,950 in 1925-26, was £572,882, an increase of £4,870 on the 1925-26 working.

19. The net receipts were £583,571, an increase of £49,282 over 1925-26.

The general financial result is as follows :—

#### Loan Charges.

(a) Interest .. ..	£373,917
(b) Sinking Fund ..	77,003
(c) Expenses of Managing Loan	804
	<hr/>
	451,724
Pensions .. ..	13,645
	<hr/>
Total .. .	465,369
Net Receipts .. ..	583,571
	<hr/>
Surplus ..	118,202
	<hr/>

### Traffic.

20. The number of passengers conveyed during the year was 1,419,237, a decrease of 31,088 from the year 1925-26. In addition 501,002 workmen were conveyed between Accra and Achimota being an increase of 174,534 over the year 1925-26.

21. The total tonnage of goods traffic exclusive of live stock carried for the year 1926-27 was 805,227, an increase of 8,339 over 1925-26.

The principal increases were :—

Commodity	Tons carried.	Increase over 1925-26.
<hr/>	<hr/>	<hr/>
Coal, Coke and Patent Fuel ..	18,542	3,983
Firewood .. ..	107,430	3,695
Manganese .. ..	394,079	21,552
Salt .. ..	4,556	727

The principal decreases were :—

Commodity	Tons carried.	Decrease.
Cocoa .. .. .	149,189	1,092
Imported Rice .. .. .	2,076	1,063
Mining Materials .. .. .	1,876	1,939
Sand and Minerals .. .. .	15,072	7,689
Native Produce .. .. .	12,035	1,040
Logs (exported) .. .. .	9,538	2,190

### Central Province Railway.

22. The Central Province Railway from Huni Valley to Foso was opened for Passenger and Goods traffic on 12th April, 1926, and from Foso to Oda on 4th October, 1926. The total number of passengers booked was 66,465 the receipts being £92,924. The tonnage of goods carried was 4,906 tons, the receipts being £6,129.

### Deviations.

23. Deviations of the Sekondi-Kumasi line between Obuasi and Kumasi were completed on the 15th November, 1926, and were taken over by Open Lines on that date.

### Northern Territories Railway Survey.

24. The survey of the eastern-route of the Northern Territories Railway was continued and Navrongo, the proposed terminus, was reached in June. The projected location gives the mileage between Kumasi and Navrongo as 350 miles.

25. Work was then commenced on the alternative or Western route from Kumasi via Sunyani, Bole and Wa to Navrongo, and good progress was made up to the end of the year.

### Roads and Motor Transport.

26. The road system of the Gold Coast is constructed entirely with a view to its use by motor cars and lorries fitted with pneumatic tires. Solid tires are prohibited by law. The mileage of motor roads is 4,690, of which about one-third may be classified as good, and the remainder as fair. The principal stretches of the more important main roads are completed by a process known as "tarmetting," i.e., about 4 inches of metal bound with sand and gravel and tar-sprayed. The improvement of the surface owing to this method of construction is most marked and must result in reduced running costs, while in the towns the adoption of this form of construction greatly reduces the dust nuisance. All roads can be and are used continually by cars of the lightest makes, as well as heavy vehicles.

27. With the exception of five places, where regular pontoon ferries are established, the roads are adequately bridged, and the necessity for driving through a drift is exceptional.

28. 832 cars and 3,455 lorries were licensed during the year, an average of nearly one motor vehicle to each mile of road.

29. The increase in native-owned motor vehicles continues to be remarkable. It is possible to arrange transport of any kind of goods for long or short distances by these vehicles on all the roads of the Colony and Ashanti and the Kumasi-Tamale road. The traffic in passengers is large.

30. 560 motor drivers' certificates of competency were granted during the year.

31. An excellent service of motor omnibuses is working in Accra, under the Accra Town Council.

### **Posts and Telegraphs.**

32. There were 198 Post Offices in the Colony, Ashanti, and the Northern Territories open at the end of the financial year, of these 137 were Postal Agencies.

33. There were 112 Telegraph Offices open at the end of the year.

34. The number of cablegrams dealt with in conjunction with the Eastern Telegraph Company was more than the previous year, being 22,418 as compared with 20,285 in 1925-26.

35. The amount of traffic dealt with at the Accra Radio Station also showed an increase.

36. For experimental receiving stations, eleven licences were issued to amateurs during the year, which brings the number of such licences now issued to twenty-four.

37. The number of Exchange Line connections increased from 578 to 628.

38. A feature of the development of this kind of communication is the extended use of the telephone, especially the trunk telephone. The illiterate native in outlying centres may be unwilling to entrust the conduct of his correspondence to an intermediary, but is quite ready to discuss cocoa prices and do business over the long-distance telephone. The telegraph continues to be largely used.

## CHAPTER VI.

## JUSTICE, POLICE AND PRISONS.

**Justice.**

The Law of the Colony is the Common law, the doctrines of equity, and the statutes of general application in force in England, on the 24th July, 1874, modified by a large number of Local Ordinances passed since that date. The Criminal Law was codified in 1892, and the civil and criminal procedure are regulated by the Supreme Court and Criminal Procedure Ordinances both passed in 1876.

2. Justice is administered by the Supreme Court, which is presided over by the Chief Justice and five Puisne Judges. Divisional Courts of the Supreme Court are held in different parts of the colony. There are also some twenty-five inferior Courts with limited criminal and civil jurisdiction, four of which are presided over by Police Magistrates and the remainder by District Commissioners. The Supreme Court has an original civil and criminal jurisdiction, and also decides appeals from the inferior courts. The Chief Justice, and the Judge in their respective provinces have also powers of revision of the decisions of the Magistrates and Commissioners in criminal cases. Appeals from Divisional Courts are heard by a full court.

3. Native customary law is administered in all the Courts, in so far as it is not incompatible with any Statute or Ordinance, and not repugnant to natural justice.

4. As between natives, recognised Native Tribunals have a limited criminal and a civil jurisdiction.

5. There is an appeal from the Native Tribunals to the District Commissioner's Court, but where the title to land is in dispute, the District Commissioner's Court is for the purposes of such appeal formed by the Provincial Commissioner.

**Police.**

6. The Gold Coast Colony and Ashanti are policed by the Gold Coast Police Force. This is divided into three branches:—

General Police

Escort     "

Marine    "

The General Police are literate and are mostly recruited from the Colony. Their duties include all police duties, but some are specially detailed for Station Office work, keeping of criminal and other records, taking finger-prints, issuing licences, and numerous other duties that cannot be carried out by illiterates.

The Escort Police are illiterate and are mainly natives of the Northern Territories. Among their number are many old soldiers of the Gold Coast Regiment and they are generally of a more military type than the educated class. They are available for all duties not requiring reading and writing and are specially useful on escort duties, guards, patrols and the like. In the event of any unusual disturbance Escort Police are employed to cope with it.

The Marine Police are employed at the ports and harbours and do their work either on land or water as occasion may require.

7. There is a Police Band which gave 240 performances during the year.

8. The Gold Coast Police Force dealt with 17,000 cases during the year.

9. The Northern Territories is policed by the Northern Territories Constabulary, a semi-military force including Mounted Infantry. The rank and file of the force are recruited locally.

A commencement has been made with the training of selected men in civil police duties such as the regulation of motor traffic, etc.

### **Prisons.**

10. There are three convict and 15 local prisons. The convict prisons are Ussher Fort at Accra, Central Prison at Sekondi and the Kumasi Prison. At Sekondi the following trades are firmly established :—Carpentry, cabinet making, furniture making, boot and shoe-making, tailoring and mat-making. At Accra the trades mentioned above are also followed with the addition of rope and string making. At Kumasi, convict labour is employed in farming and building new prison buildings.

11. The Mark System is applied to convicts sentenced to two years or over.

**CHAPTER VII.—PUBLIC WORKS.**

The most important public works in progress during the year were the construction of the Prince of Wales' School and College at Achimota and the lay-out of a model town on the site which is to be served by the port and harbour of Takoradi.

2. The buildings of Achimota had been given out to contractors who eventually found it necessary to abandon the contract. The work was then taken over by the Public Works Department, since when progress has been very rapid. The whole work is for due completion in 1928.

3. The lay-out of Takoradi Township provides for European and African Residential Areas, a business area, a reserved site for petroleum storage, a general recreation ground and park, cricket ground and golf course, and a general area for an African Township. Progress with the construction of roads and planting of shade-trees was made during the year, but the erection of buildings, for which private parties will be mainly responsible, had not been commenced.

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**CHAPTER VIII.—PUBLIC HEALTH.**

The climate, though hot and damp, is cooler than that of most tropical countries situated in similar latitudes. It is not in itself unhealthy; but the prevalence of mosquito-borne diseases demands the taking of all possible precautions. The exact death-rate among the non-official European population is difficult to ascertain, but general statistics for Europeans are given below. No data are at hand for estimating the death-rate among the natives. Infant mortality is great. The rainfall varies with the physical configuration of the country, and is very heavy in Axim and the mining districts of Tarkwa, Upper Wasaw and Lower Wasaw, etc. The rainy season is irregular and not clearly defined, but it may perhaps be said that the "first rains" begin in March and end in July; the "latter rains" are spread over the months of September and October. The rainy season is marked by a considerable fall in temperature, which is found to be refreshing to many Europeans, but proves trying to some. The Harmattan season begins in December and ends in February. It is characterised by a cool wind which is dry and bracing.

2. The majority of deaths during the year were attributed to diseases of the respiratory and digestive systems.

3. An analysis of the death and invaliding statistics of the European population is appended:—

1926-27.	Number of Residents.	Deaths.	Invali- dings.	Death rate per 1,000	Invaliding rate per 1,000.
Officials ..	1,046	3	49	2.87	46.84
Merchants..	1,861	13	49	6.98	26.33
Miners ..	440	5	15	11.36	34.09
Missionaries	134	5	1	37.31	7.46
Totals ..	3,481	26	114	7.46	32.74

4. The death-rate of 7.46 per thousand amongst the general European population shows a slight increase on the previous year—7.08 per thousand. The invaliding rate shows a considerable decrease—32.74 per thousand as compared with 40.27 per thousand in 1925-1926.

5. Treatment was given in 6,442 cases of malaria, 840 cases of dysentery, 788 cases of pneumonia, 698 cases of tuberculosis, 172 cases of smallpox, 220 cases of influenza, and 67 cases of sleeping sickness. There were no cases of plague.

6. A Research Specialist from the Rockefeller Institute, New York, resided in the Gold Coast during the year for the purpose of undertaking research into the causes of Yellow Fever.

7. The steps taken to prevent Yellow Fever and other mosquito-borne diseases resulted in the inspection during the year of 620,351 houses and 17,574 prosecutions under the Destruction of Mosquitoes Ordinance and for other sanitary offences.

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**CHAPTER IX.—EDUCATION.**

1. A new development in education in the Gold Coast took place during the year in the opening of the Prince of Wales' School and College at Achimota. A special note on this subject is given below.

2. Apart from Achimota, Education in the Gold Coast is mainly in the hands of the Education Department and several Missions, the chief of which are, the African Methodist Episcopal Zion, the English Church, the Roman Catholic, the Presbyterian, the Ewe and the Wesleyan Missions.

3. There are 17 Government Primary Schools having an enrolment of 3,704 boys and 921 girls, with a total average attendance of 4,219. Five of these schools are in the Western Province, three in the Central Province, five in the Eastern Province and four in Ashanti.

4. These schools are entirely supported and equipped from Government funds, and the total staff of teachers is 200, nearly all of whom hold local teachers' certificates. The staff at these schools is African with a few exceptions. The Headmistress of the Government Girls' School, Accra, is a European.

5. The Mission Schools are of two kinds, viz :—Assisted and Non-assisted. The former schools have qualified under the Education Ordinance and Rules for Government assistance and annually receive grants-in-aid for general efficiency.

Under the New Education Ordinance No. 21 of 1925 passed on the 30th December, 1925, the grant-in-aid to schools is based on general efficiency and the salaries paid to teachers. Teachers in Assisted and Non-assisted Schools will require to be registered.

6. The number of Assisted Schools in the Colony and Ashanti is 221. The Non-assisted Schools are usually small schools which have not, as yet, qualified for Government inspection, though there are, in addition, a few large schools which have not yet been placed on the "Assisted List". The number of Non-assisted Schools is 593.

7. The African Methodist Episcopal Zion Mission has two schools in the Central Province, four in the Trans-Volta District and one in Ashanti. The Presbyterian Mission has eleven schools in the Central Province, sixty-three in the Eastern Province, six in the Trans-Volta District and sixteen in Ashanti. The schools of the Ewe Mission are all situated in the Trans-Volta District. The English Church Mission has three schools in the Western Province, a secondary school at Cape Coast in the Central Province, one school in the Eastern Province and two schools in Ashanti. Seven Roman

Catholic Mission Schools are situated in the Western Province, ten in the Central Province, seven in the Trans-Volta District and five in Ashanti. The Wesleyan Mission has eight schools in the Western Province, eighteen primary schools and one secondary school in the Central Province, sixteen in the Eastern Province and five in Ashanti.

8. There is one undenominational school on the Assisted List ; this is situated in Accra.

9. A Mohammedan School administered by the Ahmadiya sect, has been opened at Saltpond, Central Province, and is now on the Assisted List.

10. In all these primary schools, as well as in the Government primary schools hand work is taught. In the schools in the interior it usually takes the form of Agricultural work, gardens being attached to most of the schools.

11. Instruction is given in woodwork in the Government Schools at Accra, Cape Coast, Kumasi and Essiama ; Metalwork is taught at Essiama ; book-binding, printing, carpentry, weaving netting, and basket-making are taught in some of the Mission Schools.

12. In the Assisted Schools there are 27,836 children on the roll, of whom 5,858 are girls. The average attendance at these schools is 25,113.

13. The total enrolment and average attendance in the Government and Assisted Schools is 32,461 and 29,332 respectively. The corresponding figures for the previous year were 32,827 and 29,573. Accra, the Presbyterian Mission Seminary at Akropong and Wesley College, Kumasi. The Government Training College, Accra, was opened in August, 1909. Students for this college are received from Government and Assisted Schools.

### **Secondary Schools.**

14. The English Church Mission Grammar School and Richmond College (Wesleyan Mission) are the only Secondary Schools on the Assisted List.

### **Training Colleges for Teachers.**

15. There are at present three centres at which students are trained to be teachers, viz : the Government Training College at Accra, which is now under the direction of Achimota College, the Presbyterian Mission Seminary at Akropong and Wesley College, Kumasi. The Government Training College, Accra, was opened in August, 1909. Students for this college are received from Government and Assisted Schools.

16. At the Government Training College at the end of December, 1926, there were 113 students in residence. At the Presbyterian Mission Seminary, Akropong, there were 157 students in residence and the staff consisted of three Europeans and seven African Assistants. At Wesley College, Kumasi, there were 84 students in residence whilst the staff consisted of four Europeans and four Africans.

17. A four years' course of study has been recently introduced in all Training Colleges.

18. Each year more certificated teachers are drafted from the various Training Institutions into the Government and Assisted Schools and more efficient teaching is the result.

19. All Training Colleges are subject to Government inspection.

### **Technical and Trade Education.**

20. An important educational establishment in the Colony is the Government Technical School at Accra. This school was opened in 1909 and from year to year improvements and gradual extensions have taken place. The demand for admission to this school, the only one of its kind in the Colony, is very great and only a very small percentage of the applicants can be admitted. As soon as the Training College is merged into Prince of Wales's College at Achimota, part of the present college will be taken over by the Technical School. This will allow for a considerable number of additional pupils, as there will be extra workshop and dormitory accommodation. The present staff of this school consists of a Principal, four European Masters, one of whom is Housemaster, and five African Teachers. Two of the masters and three teachers are engaged in the woodwork department and the other masters and teachers in the metalwork department.

21. Technical education of a less advanced character is also provided at schools known as Junior Trade Schools, of which there are two in the Colony, *viz.*, Kibi, Eastern Province, and Assuantsi, Central Province, and one in Ashanti at Mampong. At present there are 261 pupils in residence at these three schools; 98 are being trained in woodwork, 58 in masonry, 50 in agriculture and 55 in metalwork. Each school is in charge of a European Headmaster who is assisted by literary, woodwork, masonry and agricultural Instructors. These schools are organized entirely on Boy Scout lines. One object of these schools is to provide a preliminary training for boys who desire to become skilled artisans; but the main aim is the training and development of character and responsibility in the individual.

22. In addition to the above, technical instruction of a specialised nature may be obtained by apprentices to various Government Departments, *e.g.* Railway (Mechanical), Post Office (Telegraphy), Medical (Dispensing and Nursing), Agriculture, Forestry, Survey, Public Works Department (Electrical).

### **Games.**

23. The formation of School Football Leagues in different parts of the country has increased the popularity of Association Football. Hockey is played regularly at the Government Training College, the Government Girls' Schools at Accra and Cape Coast and at the Wesleyan Girls' High School, Accra.

24. Girls attending the larger schools are becoming more interested in games than they were even a few years ago, and are beginning to realize that school is not merely a place for "book learning."

25. In the Northern Territories educational matters were entrusted, from 1st April, 1926 to a Superintendent of Education assisted by a staff of European and African teachers. This policy was decided on primarily on account of the distance separating Tamale in the Northern Territories from the Headquarters of the Education Department in Accra, and the consequent difficulty of supervision.

26. There are five Government Primary Schools in existence and one Junior Trade School while the White Fathers Mission has a School at Navrongo and another school in course of erection at Bolgatanga.

27. The average number of male scholars attending these schools during 1926 was 339.41 while an average of 172 girls attended the three schools in which provision is made for female education.

28. The Trade School, formerly at Yendi, was transferred to Tamale where more facilities exist for this class of school, which is organised on Boy Scout lines.

29. Tuition, books etc., in all these schools are free but where scholars reside at the school a small charge is made for board.

### **Prince of Wales' School and College, Achimota.**

30. The formal opening of the Prince of Wales' College and School, Achimota, by the Governor, Brigadier-General Sir F. Gordon Guggisberg, K.C.M.G., D.S.O., R.E., took place on the afternoon of Friday, January 28th, 1927, in the Great Hall, Achimota in the presence of a great concourse of several thousands of people. After a short service conducted by the Chaplain, addresses were delivered by the Governor, the Honourable Nana Ofori Atta, Omanhene of Akim Abuakwa; the Honourable Mr. Casely Hayford; the Acting Director of Education; and the Principal of Achimota.

31. It is designed at Achimota to provide a continuous course of primary and secondary education, with special attention to training in character, lasting over a period of about 14 years, for 750 pupils at an annual cost to the parent ranging from £20 for the youngest children to £75 for the eldest.

32. The buildings complete at the end of the year consisted of two dormitory blocks, one class-room block, dining hall, kitchens, offices and fifteen Staff bungalows.

33. Until January 1927 the School consisted of six children. In that month 59 new admissions were made out of 250 applications, 23 of them were girls. The average age was six years and three months. Classes were conducted in three languages, Twi, Fanti and Ga; spoken English was taught in all the classes. The intelligence of the children proved very satisfactory and their health good. They made striking progress in games and other kinds of corporate activity. There were eight older girls under training for Kindergarten teaching and general child welfare.

34. Good progress was made on the farm which has been started at the College, in poultry and stock raising, in agricultural experiments and in the development of an ornamental garden.

35. As well as the complete education, from first to last, which will be provided at Achimota, the scheme includes the training of teachers. The Training College for Teachers at Accra, formerly administered by the Education Department, was taken over by the staff of Achimota, the number of students being about 100. In connexion with this institution, practical community service, holiday walking parties, week-end camps, and inter-collegiate athletics may be mentioned as some of the activities undertaken.

36. The Gold Coast Teachers' Association was formed in connection with Achimota. Fifty-one local associations and seven-hundred and forty-one teacher members were affiliated.

37. A library for teachers was opened at Achimota and at the end of the year its membership was 169.

38. Refresher courses for teachers are part of the educational scheme of Achimota and several were held during the year; at the largest, forty-three teachers attended the Training College for a course of one month's duration.

**CHAPTER X.—LAND AND SURVEYS.****LAND.**

1. The cardinal principle adopted by Government in framing its land policy is that all land in the Colony belongs, or did originally belong, to the native, and that all land has an owner. That it is not easy to translate this theory into practice is evidenced by the number of law suits relating to the boundaries of land that annually come before the Courts for decision.

2. A more detailed account of the Native system of land tenure and the divisions recognised by Native Customary Law will be found on pages 275 to 279 of the "Gold Coast Handbook."

3. Government has power under the existing law, when land is required for public purposes, compulsorily to acquire it, upon payment of compensation.

4. When land is required by individuals or companies for mining, agricultural or arboricultural purposes, it is necessary in certain cases to proceed under the Concessions Ordinance, which empowers the Court to impose such conditions upon the tenants as may seem desirable and just in the interests of the Native Land Owners.

5. When land is required merely for building and such purposes it is usual to acquire in accordance with English Conveyancing Practice. The cost of land is heavy but varies a great deal according to locality.

6. A Registry of Deeds is attached to the Supreme Court but the duties of this office are being taken over by a special Lands Branch of the Survey Department and while no change in the present system of registration is contemplated, it is hoped by the completion of Key Maps to facilitate transactions in regard to land.

**SURVEYS.**

7. The Survey Department is divided into three main branches:—

- (a) Headquarters and Printing.
- (b) Cadastral Branch.
- (c) Topographical Branch.

8. The Printing Branch undertakes the printing of maps and including diagrams, etc., required for various Departmental plans Publications. It has also undertaken the printing of Cadastral Plans and Topographical Maps for the Sierra Leone Survey.



9. The Cadastral Branch is concerned with the production of Town Surveys, large-scale plans and plans required for acquisition or other purposes for the Lands Department. It consists of a Headquarters, Drawing and Computing offices and five Provincial Sections—one for each Province and Ashanti and one for work in the Accra District. In addition, there are special Temporary Parties for the survey of the boundaries of Forest Reserves and the survey of a Rigid Framework for the Colony.

10. Town Survey sheets on the 1/1250 scale are available for most of the larger towns including Accra, Kumasi and Sekondi. The surveys of 14 Forest Reserves had been completed by the end of March, 1927, and the primary framework in the Southern part of the Colony is well advanced.

11. The Topographical Branch is concerned with the Topographical Survey of the Colony, the work being published on the 1/25,000 and 1/62,500 scales. By the end of March, 20 sheets had been published on the former scale and 82 on the latter. The total area surveyed to date is about 55,600 square miles including 10,000 square miles surveyed in the Northern Territories before the war.

12. During the year under review the Printing Department has carried out a large amount of work for other Departments and, in addition, it produced 15 Field Sheets on the 1/62,500 scale and 4 Standard Sheets on the 1-125,000 scale as well as a new edition of the Wall Map. The Cadastral Branch completed the Town Surveys of Dunkwa and Nsawam and also carried out a large number of minor surveys.

13. In the Topographical Branch part of the personnel had to be diverted for the demarcation of the frontier between the Gold Coast and the Ivory Coast. Good progress was made on this and in addition the Prampram, Akuse, Ada and Joje sheets were completed and considerable progress made on the survey of the Kintampo, Banda, Navrongo and Tumu Sheets.

## GEOLOGICAL SURVEY.

14. During the year under review the staff of the Geological Survey were engaged chiefly in the Northern Territories of the Gold Coast in connection with the proposed extension of the Railway.

15. The field work of this period resulted in the discovery of the following rocks and minerals:—

### Manganese.

16. Three deposits of Manganese Ore were found but none of them are of economic importance owing to the low percentage of manganese contained.

**Gold.**

17. Prospects of coarse gold were found at Zanleregu, to the east of Zuaragu, on an andesite area, similar to that near Tishi in the Bawku District, and are considered to be worthy of further attention.

**Platinum.**

18. This metal was found in small quantities in dykes of hornblendite at Mamkwadi near Winneba and in smaller quantity in a rock on the Central Province Railway, both places being in the Colony.

**Barite.**

19. Barytes (Barium Sulphate) A large deposit of barite (Barium Sulphate) was found in the bank and bed of the White Volta River about three miles above Daboya, which may prove, at a later date, to be of economic value.

**Limestone.**

20. Patches of fair to good limestone were observed at several places along the Black Volta River and in the country North-West of Kintampo.

21. The operations of the Geological Survey during the year were mostly over country covered with rocks of the Voltaian System, in which metalliferous minerals have hitherto proved to be rare. This accounts for the comparatively poor results of such minerals obtained during this period.

**Bulk Tests of Bauxite.**

22. The bulk tests of thirty tons of Bauxite from Mount Ejua-nema and Sefwi, were completed by the British Aluminium Company and proved the massive bauxite to be highly satisfactory. A representative of the Company visited the Colony during the year for the purpose of examining the deposits.

**CHAPTER XI.—LABOUR.**

1. All over the Gold Coast may be found in large numbers illiterate labourers who have been attracted from the French territory to the north by the prospect of good work and wages. These, with the natives of the Northern Territories who have been led to travel southward by the same inducements, form the bulk of the unskilled labour supply. As workers they are reliable and strong, and fairly adaptable without being conspicuous for intelligence ; they are chosen for preference by European employers on most works involving manual labour. Wages average at 1s. 6d. per day for men, and 1s. for women and boys.

2. The work on the farms and native buildings is done mainly by the owners and their families. Immigrant labourers are also employed however, especially in gathering cocoa.

3. The demand for skilled labour is met by artisans trained by the various Government or Mission educational institutions and as apprentices in the Government Departments. Carpenters, blacksmiths, masons and other artisans are not difficult to obtain. A trained workman may earn from 3s. 6d. to 5s. a day, or more, according to his knowledge and experience.

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**CHAPTER XII.—MISCELLANEOUS.****Legislation.**

(This paragraph deals with the calendar year, 1926).

**Gold Coast Colony.**

1. During the year 1926 thirty-one Ordinances were passed by the Legislative Council ; of which the following are those of more general interest :—

2. No. 2 of 1926.—The Carriage of Goods by Sea Ordinance, 1926. This Ordinance contains similar provisions to those of the Carriage of Goods by Sea Act, 1924, of the Imperial Parliament ; and it imports into the law of the Colony the revised Brussels Rules with respect to Bills of Lading, subject to certain minor modifications appropriate to the circumstances of the Gold Coast Colony.

3. No. 4. of 1926.—The Criminal Procedure Amendment Ordinance, 1926, re-settles the main provisions relating to search warrants ; the new provisions being somewhat wider than those previously in force.

4. No. 11 of 1926 and No. 29 of 1926.—The Diamond Mining Industry Protection Ordinance 1926 (as amended by the Diamond Mining Industry Protection Amendment Ordinance, 1926), together with the regulations made under them, is designed to provide statutory safeguards against illicit dealings in diamonds.

5. The provisions are however only such as have been deemed appropriate to local conditions, and are not characterised by the same stringency as marks the corresponding legislation of some other countries, where the local conditions are different.

6. The Ordinance provides for the licensing of dealers to purchase diamonds and to export diamonds for sale ; and holders of diamond mining concessions are required to take out such a licence. A person finding diamonds on his own land can only dispose of the same under licence from the District Commissioner ; and the Ordinance also contains strict provisions with respect to the keeping of prescribed registers.

7. Under section 9, the Governor has power to declare areas of land to be Diamond Areas, divided into an Area of Exploitation and an Area of Restriction ; and regulations can be made regulating the movements of persons and the conveyance of articles within such areas.

8. It is hoped that the provisions of these Ordinances will effectively safeguard the interests of this industry, without bearing with undue hardness on the native inhabitants.

9. No. 13 of 1926.—The Registration of United Kingdom Designs Ordinance, 1926, provides for the registration in the Colony of industrial designs registered in the United Kingdom.

10. No. 24 of 1926.—The Criminal Code Amendment Ordinance, 1926, strengthens the law in dealing with the traffic in obscene publications, etc., and was passed in pursuance of the 1923 Geneva "Convention for the Suppression of the Circulation of and Traffic in Obscene Publications"; to which Convention the Colony is adhering.

11. No. 26 of 1926.—The Dangerous Drugs Ordinance, 1926, is a comprehensive enactment designed to carry out the requirements of the 1925 Geneva Drugs Convention, to which the Colony is adhering.

### **Ashanti.**

12. During the year 1926 seven Ordinances were enacted with respect to Ashanti, certain of which were enacted for the purpose of applying to Ashanti certain Ordinances of the Gold Coast Colony.

13. The only Ordinance seeming to require special mention is No. 3 of 1926, the Ashanti Concessions Amendment Ordinance, 1926, which enables the Conservator of Forests in some degree to control the exercise by concession-holders of their rights with respect to timber and trees on concession areas.

### **Northern Territories of the Gold Coast.**

14. During the year 1926 seven Ordinances were enacted with respect to the Northern Territories of the Gold Coast; but none of these are such as to require special mention.

### **The British Sphere of Togoland.**

15. During the year 1926 two Ordinances were enacted with respect to the British Sphere of Togoland.

16. No. 2 of 1926.—The German Patents and Trade Marks Ordinance, 1926,—was enacted to give effect to certain provisions of Article 311 of the Treaty of Versailles; and it allows proprietors of German patents and German trade marks which were in force in the British Sphere immediately prior to the 10th January, 1920, to apply, within one year from the commencement of the Ordinance, for the registration of the same. On such registration being effected, the validity of the patent or trade mark is preserved for so long as it remains in force in Germany; but, in the case of a trade mark only so long as it remains in force in Germany without renewal.

### **Banking.**

17. The usual Government accounts at various branches of the Bank of British West Africa and Barclay's Bank (Dominion, Colonial and Overseas) were maintained during the year.

18. The Bank of British West Africa, which commenced business in Accra, on the 1st January, 1897, has since opened branches at Axim, Sekondi, Tarkwa, Kumasi, Cape Coast, Saltpond, Winneba, Bekwai, Koforidua, Nsawam, and Dunkwa and agencies at Obuasi, Prestea and Half-Assini.

19. The Colonial Bank now Barclay's Bank (Dominion, Colonial and Overseas), established in Accra on the 24th February, 1917, has now branches at Sekondi, Winneba, Kumasi, Koforidua, and Nsawam.

20. A Government Savings Bank conducted by the Treasury was established in 1888. The business was transferred to the Post Office in 1905, and is rapidly increasing. The amount standing to the credit of depositors on 31st December, 1926, was £66,920, an increase of £7,236, over last year.

21. Penny Banks in connection with the Post Office have also been established in the Principal Government Schools.

### Imperial Institute.

22. The Institute continued to undertake investigations on behalf of the Gold Coast during the year, which included the systematic examination of Gold Coast Timbers referred to in the report for 1925-26.

23. A new site has been chosen for the Gold Coast Court comprising one well-lit bay of the North Gallery. The new exhibits received from Wembley, have been arranged in the Court, two large wall cases having been purchased to accommodate these additional exhibits.

24. A collection of specimens of economic minerals consisting chiefly of bauxite and manganese have been received from the Director of the Gold Coast Geological Survey and placed on exhibition in the Court.

25. The large models of Achimota College and Takoradi Harbour have also been installed. The Court is, however, lacking in dioramas and other methods of pictorial representation which make the modernised courts attractive to non-technical visitors. A scheme has been prepared for improving it and bringing it into line with more up-to-date Courts.

26. Their Majesties the King and Queen paid a visit to the Court on December 15th, 1926.

27. Increased use is being made of the Exhibition Galleries by schools for teaching Empire geography and development. Lecture demonstrations are given daily to school teachers and school children in the galleries.

28. Surplus exhibits, chiefly ethnological specimens, have been presented to provincial museums, and specimens of Gold Coast products have been distributed to schools.

29. Pamphlets relating to the Gold Coast are distributed to enquirers at the Central Stand where picture postcards of Gold Coast views are also obtainable.

### **General.**

30. It is confidently expected that the next Census will reveal substantial increases in the population the tendency of immigration from the north being unchecked, and no tendency towards emigration being as yet evinced. The European population certainly increases, and the provision of suitable living quarters for employees is the cause of large capital expenditure on the part of all employers. The trade and activities of the Colony continue to develop rapidly, and the institution of a Commercial Intelligence Bureau in London, whose functions are enumerated in Chapter I paragraph 9 above enables persons interested in Gold Coast affairs to obtain more detailed information that is contained within the limited compass of this Report.

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## APPENDIX A.

**List of certain Publications, prices thereof and where they may be obtained.**

Publication.	Price.	From whom obtainable.
Address by the Governor on Estimates.	5/-	Colonial Secretary's Office, Accra, Gold Coast Commercial Intelligence Bureau, London.
Departmental Annual Reports (bound)	15/-	Colonial Secretary's Office, Accra, Crown Agents, London.
Blue Book.	15/-	Colonial Secretary's Office, Accra, Gold Coast Commercial Intelligence Bureau, London.
Civil Service List.	1/6d.	Colonial Secretary's Office, Accra.
Legislative Council Debates bound.	10/6d.	Colonial Secretary's Office, Accra.
Gazettes	1d. per leaf.	Colonial Secretary's Office, Accra, Crown Agents, London.
Gazettes—Annual Subscription.	£2	Colonial Secretary's Office, Accra, Crown Agents, London.
Gold Coast Handbook.	7/6	Colonial Secretary's Office, Accra, Crown Agents, London.
Gold Coast Review	2/-	Colonial Secretary's Office, Accra, Commissioner of Western Province, Sekondi.
Customs Import and Export Lists.	2/-	Commissioner of Central Province, Cape Coast, Gold Coast Commercial Intelligence Bureau, London.
Customs Tariff and Customs House Guide.	3/-	Colonial Secretary's Office, Accra. H.M. Customs, Accra.



APPENDIX A.—*continued.*

Publication.	Price.	From whom obtainable.
Geological Survey Bulletin No. 1.—Outline of the Mineral and Water- Power Resources of the Gold Coast, British West Africa, with Hints on Prospecting.	1/-	Colonial Secretary's Office, Accra.
Road Guide.	2/-	Colonial Secretary's Office, Accra.
The Gold Coast: Some Consideration of its Structure, People and Natural History.	1/-	Colonial Secretary's Office, Accra.

## AGENTS FOR THE SALE OF GOLD COAST MAPS

Maps.	Price.	From whom obtainable.
		<i>In Great Britain.</i>
Wall Map of Colony, 2nd Edition, 1927.—Size 66 x 88 inches. Scale 1-69 inches to 10 miles. Mounted on cloth and rollers.	£1 10s. od.	W. & A. K. Johnston, Ltd., Easter Road, Edinburgh.
General Map of Colony and dependencies.—Size 31 x 21 inches. Scale 1-1,000,000.	Folded 8/- Flat 4/-	Edward Stanford, Ltd., 12-14, Long Acre, London, W.C.2.
Standard Map.—Scale 1-125,000, or nearly two miles to the inch.	Folded 4/- Flat 2/-	Sifton Praed & Co., Ltd., 67, St. James Street, London, W.C.1.

AGENTS FOR THE SALE OF GOLD COAST MAPS.—*contd.*

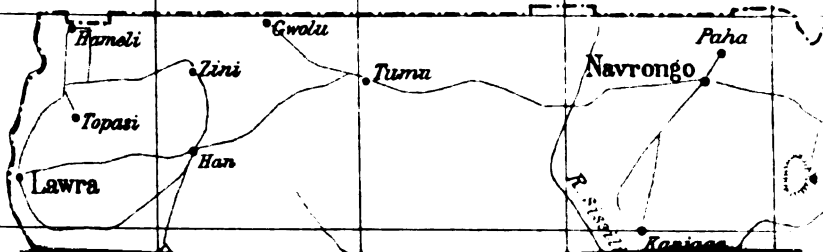
Maps.	Price.	From whom obtainable.
		<i>In Great Britain.</i>
Town Plans.—Accra scale 1-1,250.	2/-	Philip, Son & Nephew, 20, Church Street, Liverpool.
do. Scale 1-350, in two sheets.	2/- each Folded 8/-	J. E. Cornish, Ltd., 16, St. Ann's Square, Manchester.
		<i>The Gold Coast.</i>
do. Kumasi, scale 1-6,250, in two sheets.	2/- each Folded 8/-	Surveyor-General, Cantonments, Accra.
do. Scale 1-1,250.	2/- per copy.	African & Eastern Trade Corporation, Ltd., Accra and branches.
Topographical Map.— Scale 1-62,500, or nearly one inch to one mile.	Folded 4/- Flat 2/-	Wesleyan Methodist Book Depot, Cape Coast, Kumasi and Sekondi.
Road Map.—1-500,000. Shows all motor routes with official numbers of sections.	Folded 8/- Flat 4/-	do.

N.B.—The address of the Colonial Secretary's Office is P.O. Box No. 140, Accra, Gold Coast.

The address of the Gold Coast Commercial Intelligence Bureau is Abbey House, 8 Victoria Street, Westminster, S.W.



# U P P E R V O L





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COLONIAL REPORTS—ANNUAL



No. 1387

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## REPORT FOR 1926—27

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Cmd. 2898. 3d. (3½d.).

Agricultural Economics in the Empire.

(E.M.B. 1.) 6d. (7d.).

Tropical Agricultural Research in the Empire,  
with special reference to Cacao, Sugar Cane,  
Cotton and Palms. (E.M.B. 2.)

1s. 6d. (1s. 9d.).

Agriculture in Trinidad. Report on Develop-  
ment. (E.M.B. 3.)

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# COLONIAL REPORTS—ANNUAL

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No. 1387

## GILBERT AND ELLICE ISLANDS COLONY

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### REPORT FOR 1926—27

*(For Report for 1923-24 see No. 1246 (Price 6d.),  
and for Report for 1924-26 see No. 1369 (Price 1s. 0d.).)*



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# GILBERT AND ELLICE ISLANDS COLONY.

**REPORT FOR THE PERIOD 1st JULY, 1926—30th JUNE, 1927.**

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## History and Geography.

The Gilbert and Ellice Islands form a chain of coral atolls about 800 miles long in mid-Pacific, cut by the Equator and lying close against the 180th meridian of East longitude. Besides the 24 islands contained in these two groups, the Colony includes Ocean Island, some 250 miles to westward, and Fanning, Washington, and Christmas Islands, some 1,800 miles to eastward, of the Gilberts.

The total land area of the Colony does not amount to 180 sq. miles. There is no island, except Ocean Island, which rises as much as 15 feet above sea-level, or exceeds in width five furlongs from beach to beach. The atolls are ribbons of coral rock from five to fifty miles long, topped with a soil so sandy that it will support no useful plant save the coconut and pandanus palms and a coarse edible tuber of the taro (*calladium*) family laboriously cultivated by the native.

The Gilbert Group was discovered piecemeal by British Naval officers between 1765 and 1824, the Ellice Group between 1781 and 1819. In 1856, Hiram Bingham, the first white missionary, of the American (Boston) Board of Foreign Missions, brought Christianity to the Gilbert Islands. Since that date the inhabitants of both Groups have become nominally Christian.

In 1892 the two Groups were proclaimed a British Protectorate by Captain H. M. Davis, of H.M.S. "Royalist." The jurisdiction of the Resident Commissioner of the Protectorate was extended to Ocean Island by a Proclamation of 1900. At the expressed desire of the natives both Groups were annexed to His Majesty's dominions by an Order in Council of the 10th November, 1915, and were known as the Gilbert and Ellice Islands Colony as from the 12th January, 1916.

Ocean Island, of which the inhabitants are closely related to the Gilbertese, was included within the boundaries of the Colony by an Order in Council of the 27th January, 1916, which came into operation on the 3rd April following. By the same Order, Fanning and Washington Islands were also made part of the Colony, while Christmas Island was included by an Order which took effect from the 10th November, 1916.

The language of the Ellice Islands may be regarded as a dialect of Samoan; that of the Gilbert Islands, while possessing Polynesian affinities, is entirely different from the Ellice speech, and shows a strong relationship to certain dialects of the Melanesian area. No pidgin English is used in the Colony. Very few natives understand any language save their own.

The Gilbertese of to-day are the descendants of a small, black-skinned people who, in about the third century of our era, suffered and absorbed an invasion by a large, tawny race of Samoan type. The Ellice islanders are an offshoot of pure Samoan stock, who settled in their present home during the 16th century.

The currency used in the Colony is Australian. Weights and measures are English. A system of international money orders is in use.

## I.—GENERAL.

The Colony is under the charge of a Resident Commissioner, who is responsible for his administration to the High Commissioner for the Western Pacific, who resides in Fiji. Colony Headquarters are established at Ocean Island, the outlying islands being grouped into five administrative areas, each under the control of a District Officer. Medical and Educational Headquarters are at Tarawa, in the Gilbert Islands.

Much of the work of administration is done by the natives themselves. Each island has a Native Magistrate who, in session with the village headmen, constitutes a monthly Court (established under the Native Laws Ordinance, 1917) for the enforcement of island

Regulations. The Magistrates form a splendid body of men, whose loyalty has in most cases stood the test of 20-30 years of service under the Government.

Though the climate is splendid, and malaria is non-existent, living conditions for Europeans in the two Groups are, on the whole, bad. The sandy soil affords no grazing for sheep or cattle; there is thus no fresh milk, butter, or meat. Fresh fruit and green vegetables are also unknown. Imported poultry can be successfully reared, and fish is abundant, but much tinned food must be used, which causes both waste and expense. Gastric and intestinal conditions are the common local result of insufficient and improper nutrition.

## II.—FINANCE.

The totals of Colonial revenue and expenditure for the last five years have been :—

<i>Year.</i>	<i>Revenue.</i>			<i>Expenditure.</i>		
	£	s.	d.	£	s.	d.
1922-23 ... ..	44,472	19	3	51,808	4	5
1923-24 ... ..	55,792	8	2	40,820	10	1
1924-25 ... ..	62,770	16	0	36,419	17	6
1925-26 ... ..	51,697	1	10	40,610	1	1
1926-27 ... ..	52,925	1	5	44,869	13	5

### *Revenue.*

The following are the details of revenue for the periods 1925-26 and 1926-27 :—

<i>Sources of Revenue.</i>	<i>1925-26.</i>			<i>1926-27.</i>		
	£	s.	d.	£	s.	d.
Customs ... ..	23,232	12	8	20,591	11	11
Native Taxes ... ..	9,097	6	10	6,175	13	0
Licences, &c. ... ..	8,097	9	9	13,024	2	11
Fees of Court, &c. ... ..	1,604	2	5	1,812	10	11
Post Office ... ..	604	15	1	810	13	10
Telegrams ... ..	442	10	7	390	16	3
Royalties ... ..	6,144	5	5	6,464	5	6
Interest ... ..	1,268	15	1	1,845	10	8
Miscellaneous ... ..	455	4	0	1,029	16	5
Imperial Grant ... ..	750	0	0	750	0	0
<b>Totals ... ..</b>	<b>£51,697</b>	<b>1</b>	<b>10</b>	<b>£52,925</b>	<b>1</b>	<b>5</b>

The fall in revenue from the source "Native Taxes," from £9,100 in 1925-26 to £6,200 in 1926-27, was caused by the remission of taxation, during the latter year, in six islands of the Southern Gilberts, on account of drought conditions.

The advance of about £5,000 shown under the head "Licences, &c.", was caused by the increase of revenues accruing from Capitation Tax, as a consequence of the enlargement of the British Phosphate Commission's labour force at Ocean Island; and also by the allocation to this head of moneys paid in commutation of other taxation by Fanning Island, Limited, and by Central Pacific Plantations, Limited, on Christmas Island.

### *Expenditure.*

Details of Colonial expenditure for the same periods are as follows:—

<i>Heads of Expenditure.</i>	1925-26.			1926-27.		
	£	s.	d.	£	s.	d.
Public Debt... ..	3,816	8	8	—		
Pensions ... ..	905	14	2	847	18	3
High Commissioner's Department ... ..	2,116	3	7	2,310	14	2
Resident Commis- sioner's Dept. ... ..	3,023	13	4	2,780	7	5
Treasury and Cus- toms ... ..	2,058	3	9	1,541	16	10
District Administra- tion ... ..	3,387	0	6	3,789	6	3
Police and Prisons...	4,099	1	1	5,354	5	3
Ocean and Fanning Islands Defence Force ... ..	31	7	3	42	9	5
Medical Department	4,844	17	4	8,672	19	9
Transport ... ..	5,699	11	6	1,481	5	7
Postal Department...	294	6	1	306	5	6
Wireless Telegraph Department ... ..	1,231	1	2	1,334	10	5
Audit Department ...	216	11	6	341	18	0
Miscellaneous ... ..	630	6	3	4,042	5	0
Lands Commission	277	0	9	83	11	9
Education Depart- ment ... ..	3,881	6	0	4,700	2	0
Public Works (An- nually recurrent)	861	14	6	1,559	16	4
Public Works (Ex- traordinary) ... ..	147	12	9	2,178	10	2
Island Administra- tion ... ..	3,088	0	11	3,501	11	4
<b>Totals ... ..</b>	<b>£40,610</b>	<b>1</b>	<b>1</b>	<b>£44,869</b>	<b>13</b>	<b>5</b>

The Public Debt, consisting of the unpaid balance of an original 5½ per cent. loan of £13,000 raised by the Colony in 1920, to cover its share of the purchase price of the motor yacht "Pioneer," was extinguished during February, 1926.

Assets and Liabilities, on the 30th June, 1927, were :—

	<i>Assets.</i>			<i>Liabilities.</i>		
	£	s.	d.	£	s.	d.
Cash—						
In hand and at						
Bank ...	30,877	1	8			
Drafts, Remit-						
tances ...	483	7	11			
Deposits ...				36,949	12	2
Advances ...	154	9	4			
Suspense Account	975	1	2			
Unallocated Stores						
Account ...	—			—		
Imprests Account	—			—		
Investment Depre-						
ciation Account	—			300	0	0
Investments—						
Fixed Deposits	20,000	0	0			
Crown Agents	19,347	1	2			
Banaban Roy-						
alties ...	25,530	17	10			
Fakaofu Na-						
tives ...	—			—		
Crown Agents'						
Bank Ad-						
vance at call	6,600	0	0			
Excess of Assets						
over Liabilities	—			66,718	6	11
Totals ...	£103,967	19	1	£103,967	19	1

### III.—PRODUCTION.

Besides the phosphate of Ocean Island, the only considerable product of the Colony is the copra of the two Groups and of Fanning, Washington, and Christmas Islands. As stated in last year's report, the possibility of establishing bee-culture as a native industry is being investigated. Experimental hives of Mexican bees were installed, towards the end of the period under review, at the King George V School for native boys at Tarawa, with the object of disseminating from that centre a knowledge and habit of bee-keeping. Great interest in the experiment is being shown by the boys, and also by the natives of Tarawa. Apart from the production of honey

and beeswax, it is hoped that the widespread culture of bees may be followed in the Gilbert and Ellice Islands by an increase in the productivity of the coconut plantations, such as that already reported in respect of Fanning Island.

The Administration was especially active, during the year 1926-27, in impressing upon the natives the need of improvement in their methods of planting. A large number of landowners were persuaded to thin out their coconut-palms in overcrowded plantations, and to set young trees in alignment and at proper intervals on hitherto uncultivated lands. Much useful work was also done in encouraging the production of copra in large pieces, with a view to supplying the market with this commodity in the form most acceptable to European buyers.

No special development of the phosphate industry occurred in the period reviewed, but good weather conditions at Ocean Island enabled the loading and export of 258,775 tons, a quantity exceeding the previous year's total of 70,440 tons. The following are the phosphate export figures for the five years ending 30th June, 1927 :—

				Rate per Ton.			Value.		
				Tons.	£	s. d.	£	s. d.	
1922-23	...	...	...	134,350	1	10 0	201,525	0 0	
1923-24	...	...	...	189,475	1	6 0	246,318	0 0	
1924-25	...	...	...	206,451	1	5 0	258,066	0 0	
1925-26	...	...	...	188,335	1	7 6	258,960	12 6	
1926-27	...	...	...	258,775	1	7 6	355,815	12 6	

Copra exports for the same periods were :—

				Tons.	Value.
					£
1922-23	...	...	...	5,928	89,396
1923-24	...	...	...	3,716	54,951
1924-25	...	...	...	5,692	95,928
1925-26	...	...	...	6,341	128,461
1926-27	...	...	...	2,544	39,341

The drought conditions in the Southern Gilberts, already mentioned in connection with the remission of native taxes, were responsible for the considerable fall in copra exports during the year under review.

The London Missionary Society is continuing its experiments in the manufacture of coconut fibre and coir products, with a view to estimating the readiness with which natives might adapt themselves to such an industry.

As stated in last year's report, the Palu, or Castor Oil Fish, abounds in the Ellice Group; the shark, spear-fish, sail-fish, bonito, trevally, barracuda, and porpoise are also very plentiful. The Colony would form a convenient headquarters for a fish-oil industry.

**IV.—TRADE AND ECONOMICS.**

The gross tonnage and values of Colony exports for the five-year period 1922-1927 were respectively :—

	<i>Tonnage.</i>	<i>Value.</i>
		£
1922-23 ... ..	140,280	291,086
1923-24 ... ..	193,193½	301,545
1924-25 ... ..	215,733	369,576
1925-26 ... ..	194,682	388,157
1926-27 ... ..	261,323	395,728

The gross values of import over the same period were :—

	<i>Value.</i>
	£
1922-23 ... ..	137,128
1923-24 ... ..	109,145
1924-25 ... ..	137,695
1925-26 ... ..	125,048
1926-27 ... ..	103,453

Details of the goods imported during the financial year under review are as follows :—

	<i>Value.</i>
	£
Anchors and chains ... ..	406
Benzine ... ..	1,847
Building material ... ..	6,946
Bicycles ... ..	315
Apparel ... ..	10,141
Explosives ... ..	2,399
Hardware ... ..	7,073
Iron ... ..	1,831
Jewellery ... ..	86
Kerosene ... ..	2,212
Machinery ... ..	3,977
Oils ... ..	5,622
Perfumery ... ..	588
Photographic materials ... ..	5
Provisions ... ..	40,809
Spirits, wines, fermented liquors, etc. ... ..	2,734
Tobacco ... ..	5,014
Wire rope ... ..	1,164
Miscellaneous ... ..	20,284
Total ... ..	<u>£113,453</u>

The well-sustained preponderance of the annual value of exports over that of imports is held to indicate a generally sound economic position.

A small proportion of imported goods are of Japanese manufacture, but most imports are shipped out of Australian ports and, with but one exception, are of British manufacture. Tinned meats, vegetables, and fruits form the exception: of these the majority, of an estimated value of £10,000 yearly, are American in origin. If British preserves capable of competing with those of American manufacture are being produced, there is a distinct opening for them in this Colony.

### V.—COMMUNICATIONS.

The following is a summary of the vessels which called at Ocean Island during the year under review :—

*From—*

Australia	...	...	...	...	...	...	48
New Zealand	...	...	...	...	...	...	7
Japan	...	...	...	...	...	...	2
Hong Kong	...	...	...	...	...	...	1
Java	...	...	...	...	...	...	1
Fiji	...	...	...	...	...	...	2
Gilbert Islands	...	...	...	...	...	...	6
Other	...	...	...	...	...	...	1
							—
							68
							—

Inter-insular communication within the Colony is maintained by local trading, recruiting, and missionary vessels, and may be termed *baphazard*.

A wireless telegraph station erected by the Administration on Ocean Island maintains a public service, via Suva radio, with all parts of the world. The small wireless sets of Messrs. Burns, Philp & Company and Messrs. On, Chong & Company in the Gilbert Islands enable the maintenance of telegraphic communications with the outlying districts.

### VI.—JUSTICE, POLICE, AND PRISONS.

Ordinances for the good government of the Colony are made by the High Commissioner, and enforced locally by Deputy Commissioners in Courts constituted under the Pacific Order in Council, 1893. Appeals from these Courts are made to the Supreme Court, Fiji. A code of Native Laws is administered in Native Courts constituted by Ordinance No. 2 of 1917. District Officers, on behalf of the Resident Commissioner, are empowered to review, alter, amend, or otherwise adjust the sentences of Native Courts.



A thorough scrutiny of all judicial records was completed during the year under review; the system was standardised by the issue to Deputy Commissioners of printed forms for use in recording the minutes of proceedings in all types of criminal cases entertained by the Courts.

The Police of the Colony consist of a village constabulary appointed under the Native Laws, and an armed constabulary constituted under the Ordinance No. 9 of 1916. During 1926, a complete reorganisation of the armed constabulary was effected; a European Police Officer was appointed; and the strength of the force was increased from 44 to 63 men.

The regulation and supervision of gaols and prisons is provided for in the Ordinance No. 4 of 1916. There are three Colony gaols for prisoners undergoing sentences of over six months' imprisonment, and a prison on each island of the Groups for short-sentence prisoners. During 1926-27 the penal system of the Colony was revised; the Rules made under the Gaols and Prison Ordinance were amended; a scheme of good conduct marks for prisoners was brought into operation; and the system of gaol records was greatly extended.

## **VII.—PUBLIC WORKS.**

No public works of outstanding importance were undertaken by the Administration. The practice of the system of communal works, under which natives are required to maintain the sanitation and hygiene of their villages, was closely investigated, and arrangements were made to ensure that no native, through the negligence of village officials, should be called upon to work outside his own settlement.

## **VIII.—PUBLIC HEALTH.**

The Colony Central Hospital, Lunatic Asylum, and Lepet Asylum are situated on Tarawa in the Gilbert Group. Admissions into the Central Hospital for the year were 321; the operations performed numbered 280; deaths in hospitals were 13.

The year was one of great medical activity on outlying islands. The intensive surgical campaign against tubercular adenitis in children, begun early in 1926, was continued, with encouraging results. A total of 2,541 children, constituting the entire juvenile population of five islands, came under examination, and on this number of children were performed 3,135 operations for the removal of diseased tonsils, adenoids, and lymphatic glands. The object in view was to attack tubercular disease in its early stages, and at the source, as a measure of prophylaxis against more deeply seated infections. It is considered early to make a definite pronouncement as to the success of such measures, but it is certainly established that hundreds of children who have undergone operation are already showing great improvement in their general condition. The campaign will be continued.

An energetic attack upon yaws was conducted during the year, a total of 12,666 injections of the arseno-benzols having been given.

In addition to the above activities, great improvements were effected during the year in the treatment and general maintenance of lepers and of the insane, in their respective asylums at Tarawa.

The total population of the Colony at the Census of 1923 was 29,580.

### **IX.—EDUCATION.**

The Administration maintains two native boys' boarding schools—the King George V School at Tarawa and the Ellice Islands School at Vaitupu. A school for native boys of Ocean Island has been maintained since 1920 out of Banaban phosphate royalties.

Village schools throughout the two Groups are kept up by the London Missionary Society and the Society of the Sacred Heart. Progress was made during the year in the discussion of a scheme for standardising methods of teaching in these schools and bringing them gradually, as regards secular instruction, under a single system of control.

### **X.—LANDS.**

Under existing legislation, no sale of native lands to non-natives is permitted, and no lease may be granted for a longer period than 99 years, nor for any one parcel of land in any one island of greater extent than 5 acres.

A Native Lands Commission was constituted by the Ordinance No. 8 of 1922 to determine questions of ownership and to establish new land registers. By the Ordinance No. 2 of 1927 the Resident Commissioner was enabled to perform the duties of Lands Commissioner, his appellate functions under the earlier Ordinance being transferred to the High Commissioner.

Most of the land in the Gilbert Group is needed for the support of the native population, but there is much spare coconut-producing land in the Ellice Islands, where many tons of copra are annually wasted. A real benefit would be conferred upon the native if these spare lands could be worked on behalf of the owners, upon a profit-sharing basis. A ship, however (say an auxiliary ketch of 30 tons register), would be essential to the success of such an undertaking.

### **XI.—LABOUR.**

Native labourers from both Groups are recruited under the provisions of the Gilbert and Ellice (Labour) Regulation, 1915, for service under indenture in the coconut plantations of Fanning Island and in the phosphate workings of Ocean Island. The policy of the Administration is to encourage the recruitment of married men, so that the labourers may be surrounded, as far as possible, by home conditions. The labourers—250 on Fanning Island and 600

on Ocean Island—live comfortably, receiving housing, hospital attendance, and rations for themselves and their families on a scale authorised by Regulations. The average rate of pay earned by an able-bodied worker is 40s. per mensem.

About 650 Chinese coolies and mechanics are also engaged in the mining industry at Ocean Island.

## XII.—MISCELLANEOUS.

*Legislation.*—Within the period under review, the Ordinance No. 8 of 1926 was enacted to provide for the organization of the Colony into Sanitary Districts, in the interests of public health. Ordinance No. 1 of 1927 provides for the control of the use and sale of explosives within the Colony.

*Banking.*—An Agency of the Commonwealth Bank of Australia is established at Ocean Island. The following have been the totals of annual deposits for the past five years :—

	£
1922-23 ... ..	1,710
1923-24 ... ..	1,037
1924-25 ... ..	2,089
1925-26 ... ..	1,758
1926-27 ... ..	2,896

*Rainfall.*—Drought conditions prevailed over the Gilbert Group for the whole of the period 1926-27. The rainfall figures from Tarawa may be taken as representative of all islands :—

1926.	Inches.	1927.	Inches.
July ... ..	2.34	January ... ..	.24
August ... ..	2.00	February ... ..	1.83
September ... ..	.27	March ... ..	3.87
October ... ..	.00	April ... ..	.50
November ... ..	.54	May ... ..	.95
December ... ..	1.57	June ... ..	2.50

Total rainfall, 12 months, 16.61 inches.

ARTHUR GRIMBLE.  
Resident Commissioner,  
Gilbert and Ellice Islands Colony.

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No. 1388.

TONGAN ISLANDS  
PROTECTORATE.

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REPORT FOR 1927.

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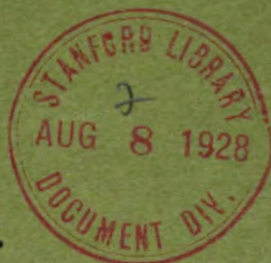
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No. 1388.

TONGAN ISLANDS  
PROTECTORATE.

REPORT FOR 1927.

*(For Reports for 1924-25 and 1926 see Nos. 1291 and  
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# TONGAN ISLANDS PROTECTORATE.

## ANNUAL GENERAL REPORT FOR THE YEAR 1927.

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### History and Geography.

The Kingdom of Tonga consists of three main groups of islands called respectively Tongatabu, Haapai, and Vavau, together with the outlying islands of Niuafoou, Niuatobutabu, and Tafahi. The main groups are situated between the 18th and 22nd degrees of South latitude and the 173rd and 176th degrees of West longitude and extend over an area of approximately 250 square miles.

The island of Niuatobutabu was discovered by the Dutch Navigators, Schouten and Lemaire, in 1616. They did not visit the main groups. In 1643 Tongatabu was discovered by Tasman and from that year until 1767, when Wallis anchored at Niuatobutabu, there was no contact with the outside world. Captain Cook visited Tongatabu and the Haapai group in 1773 and again in 1777, and named the islands the Friendly Islands. Niuafoou was discovered by Captain Edwards in H.M.S. " Pandora " in the year 1791.

The early history of the Tongans is enshrouded in myth, but it is clearly established that there at one time existed two kings, a spiritual and a temporal. The power of the Tui Tonga, the spiritual king, seems to have spread over a vast area of Polynesia,

whence he received tribute. His office was hereditary. In course of time he divested himself of power and, while retaining his ceremonial position, he delegated executive functions to a temporal sovereign. The office of the sacred king disappeared some sixty years ago and its powers passed to the temporal king. The ancient monuments of Tonga bear testimony to the might of the sacred kings. The royal tombs in Tonga consist of quadrilateral mounds, faced by huge blocks of stone, some of which rise in terraces to a height of 20 feet. The stones are coral, of immense weight, and can only have been placed in position by the concerted labour of a large body of men. During the first half of the nineteenth century the islands were the scene of civil wars. These were finally checked during the reign of George Tubou I, who had by conquest gathered all power into his own hands. He was finally proclaimed King in 1845. King George was an absolute ruler, but, acting under missionary influence, he granted a Constitution to his people based on the English model. This Constitution was from time to time amended, yet in essentials the present Constitution differs but little from the original Constitution.

The first king died in 1893, after a memorable reign of nearly fifty years, and was succeeded by his great grandson. The present monarch, Queen Salote, succeeded to the throne on the death of her father, King George Tubou II, in 1918.

A Protectorate was proclaimed over Tonga in 1900, and a British Agent appointed.

English coin was made the currency of Tonga by a Statute passed by the Tongan Parliament in 1906. Tongan Government notes were issued in 1919 and at present notes to the value of £21,000 are in circulation. The issue is secured by a coin and investment reserve. English weights and measures are in use.

### I.—GENERAL.

An event of interest during the year was the reappearance of Falcon Island. This island, which lies about forty-five miles to the north of Tongatabu, was first observed as a breaking reef in the year 1865, and in 1885 it appeared as an island. Its area was continually changing and in 1894 it was 3 miles long,  $1\frac{1}{2}$  miles broad, and 50 feet high. It disappeared in the year 1898, and, although it showed again in 1900, it disappeared altogether fourteen years ago. It was reported on the 1st October, 1927, to be erupting, and when observed a week later it was 1,730 yards long, north and south, 1,430 yards broad, east and west, and 305 feet high. The volcano played for one minute every twenty minutes and the eruption rose to a height of over 4,000 feet. It is occasionally visible from Tonga.

The Protectorate was visited during the year by His Majesty's Ships "Diomedé", "Veronica", and "Laburnum".

## II.—FINANCE.

The Tongan financial year ends on the 30th June. The revenue and expenditure totals for each of the last five years are as follows :—

Year.	Revenue.	Expenditure.
	£	£
1922-23 ... ..	68,949	72,149
1923-24 ... ..	81,023	61,796
1924-25 ... ..	74,335	63,539
1925-26 ... ..	91,696	68,759
1926-27 ... ..	72,562	83,513

There is no public debt and at the close of the last financial year the surplus funds of the country amounted to £120,593. These funds are invested in War Bonds, New Zealand and Straits Settlements Stock, and in fixed deposit with the Bank of New Zealand. There is no loan issue.

A Government Savings Bank was established in 1926. During the first year of operations the total amount of deposits and withdrawals was £3,495 and £558 respectively. Last year, deposits to the amount of £7,929 were received and withdrawals amounted to the sum of £3,900. There is no other Bank in Tonga.

The principal sources of revenue are the Native Tax, import and export dues, trading licences, Court fees, rents of Government lands, and interest on investments.

All male Tongans when they attain the age of sixteen years pay a poll tax of 36s. per annum.

The general tariff on imported articles is 12½ per cent. *ad valorem*; there are no preference duties. There is an export tax on copra of 15s. per ton and this was increased during the year by the levy of a surtax of 5s. per ton. The increased duty will remain in force until 31st December next. Trading licences, gun licences, and Court fees were slightly increased during the year and a Stamp Act was passed providing for duty on receipts, mercantile documents, and leases. There had been a heavy fall in Customs duties during the previous year and it was found necessary to revise, in the manner indicated, the quantum of taxation.

The excess of expenditure over revenue during the year is accounted for by this fall in Customs dues, owing to trade depression following a drought, and by the purchase, out of surplus funds, of a Government despatch vessel.

## III. PRODUCTION.

Apart from foodstuffs produced by the Tongans for domestic use, copra is the sole agricultural production of the islands. Fifteen years ago a considerable fruit export trade existed, but the absence of direct communication with New Zealand, which ceased during the war, has killed the trade.

The following table shows the quantity and value of copra exports for the five years ending 31st December last :—

Year.					Tons.	Value. £
1923	...	...	...	...	14,339	257,586
1924	...	...	...	...	14,533	297,487
1925	...	...	...	...	13,758	280,386
1926	...	...	...	...	13,992	255,156
1927	...	...	...	...	11,252	225,344

The decreased production in 1927 was due to the effect of the severe drought which prevailed during the latter half of 1925 and the first quarter of 1926.

Every Tongan landowner is compelled by law to have four acres of his tax allotment of  $8\frac{1}{2}$  acres properly planted with coconuts. There is also a provision in the law to enforce the clearing of plantations.

A Copra Act was passed in 1926, having for its object the improvement in copra manufacture, and it has been made a statutory offence for a trader to have bad or damaged copra in his possession.

Copra production is almost entirely carried on by the Tongans. There are only a few European planters in the islands. The Tongan Government do not encourage European settlement and, apart from this fact, the difficulty of obtaining labour would form an effective bar to development of the land by Europeans.

There is no forestry or fishing production. Ten whales were caught during the year by a European whaler who lives in the islands. They were sold locally as foodstuff.

There are no minerals.

#### IV. TRADE AND ECONOMICS.

The following table shows the value of the import and export trade during the last five years :—

Year.					Imports. £	Exports. £
1923	...	...	...	...	195,020	267,619
1924	...	...	...	...	232,600	306,658
1925	...	...	...	...	258,322	290,115
1926	...	...	...	...	227,882	263,198
1927	...	...	...	...	157,783	235,391

The export trade is confined to copra. It is exported on optional bills of lading and is mostly sold on the Continent.

The effects of the drought, to which reference has already been made, is apparent from the import figures. There has been a tightness of money throughout the year and the traders have not been heavy importers of new stocks. Imports consist chiefly of drapery, hardware, flour, tinned meats, sugar, kerosene, ben-

zine, timber, and gunny bags. The imports, apart from kerosene, benzine, and timber, are of United Kingdom, Australian, and New Zealand origin. The following figures show the percentage of imports from foreign countries during the last five years :—

Year.							Per cent.
1923	...	...	...	...	...	...	3
1924	...	...	...	...	...	...	4
1925	...	...	...	...	...	...	8
1926	...	...	...	...	...	...	9
1927	...	...	...	...	...	...	11

Of the rest of the imports the United Kingdom supplied 14 per cent., New Zealand 43 per cent., Australia 26 per cent., and other British possessions 6 per cent.

The volume of the import trade from the United Kingdom has not varied in any appreciable degree during the last five years. It consists mostly of drapery, hardware, drugs, and cement. Importations of the two former lines represent approximately 20 per cent. of total importations. There is a ready market for Manchester prints, suitable for native clothing, and for other cotton wearing apparel moderately costed. There is a limited market for the British light motor-car. Benzine is retailed at 3s. 6d. per gallon and the advantages of the light car in the matter of running expenses are obvious. Four British light cars were imported during the year; these were the first importations. There are 155 motor vehicles registered in Tonga.

The leading commercial houses, viz., Messrs. Burns Philp (South Sea) Company, Limited, and Messrs. Morris Hedstrom, Limited, import through their London offices.

Tonga is overstocked with stores. Every village has its trading station, and in many cases two or three. The overhead charges of trading are high with a consequent reaction on the cost of commodities. There is a keen demand among traders for copra. The costs of the upkeep of the numerous sub-stations of the traders and the high handling charges reflect themselves on the price paid.

## V.—COMMUNICATIONS.

There is monthly communication with Auckland by a vessel of the Union Steamship Company. This vessel, after calling at Fiji *en route*, visits the three principal islands in Tonga, and returns to Auckland via Samoa and Fiji. Tonga is 1,100 miles distant from Auckland, yet the journey, on account of the route followed, occupies a fortnight. The lack of direct communication with New Zealand, which existed before the war, is severely felt.

Vessels of the Norwegian Australian Line called regularly between April and November for copra freights.

One vessel of the Clan Line called during the year, and the direct service every two months from the United Kingdom, via

ports, has been resumed this year. It was suspended during the year 1926. Steamers or schooners, with oil and timber cargoes from the United States of America, called at irregular intervals. During the year, 29 vessels from overseas of a total tonnage of 120,857 tons entered and cleared. Of this tonnage 73,728 tons was British and 41,914 Norwegian. Interinsular communication is carried out by the Tongan Government despatch vessel and sailing vessels. The Government vessel was commissioned during the year. She is a small auxiliary ship with a semi-Diesel engine.

There is a Tongan Government wireless station at Nukualofa and a sub-station at Vavau which communicates only with the main station. The Nukualofa radio communicates with Samoa and Fiji and thence by the Pacific Cable Board to all parts of the world. During the year, the Nukualofa station forwarded 1,199 messages and received 1,020. The sub-station forwarded 857 messages and received 510. There is a telephone system, with 97 subscribers, in Tonga. It serves the township of Nukualofa.

There are 35 miles of metalled roads in Tongatabu suitable for motor traffic. The by-roads are earth roads and are not suitable for heavy traffic during the wet season. It is proposed to metal the main roads on the island of Vavau, and road-making plant was installed during the year.

There are no railways in the islands.

Postal communication with the outside world is despatched monthly by the Union Company's steamer and by copra vessels. Interinsular mails are carried by the Government despatch vessel and by cutters. The Collectors of Customs act as Postmasters at Nukualofa, Haapai, and Vavau. British postal orders are issued at these offices, and money orders, for transmission through Australia, may also be obtained.

## VI.—JUSTICE, POLICE, AND PRISONS.

There are two jurisdictions in Tonga. Under the provisions of the Treaty of 1900, civil jurisdiction over British subjects and foreigners is exercised by the British Agent, who holds a commission as a Deputy-Commissioner of His Britannic Majesty's High Commissioner's Court for the Western Pacific. In criminal matters British subjects and foreigners are also subject to the jurisdiction of the High Commissioner's Court for offences other than offences against Tongan laws relating to Customs, Taxes, Public Health, and Police not cognisable as such under the provisions of the Pacific Order in Council. The Agent is a Judicial Commissioner in Divorce. The judicial work of the Agent is light. During the year, the Court sat on fifteen days.

The Courts of the Tongan Government have full jurisdiction over Tongans and the limited criminal jurisdiction stated above over British subjects and foreigners. The Tongan judicial system

is based on the British model, and trial by jury, in cases which come before the Supreme Court, is provided for in the Constitution. Serious crime among the Tongans is of infrequent occurrence and during the last five years the average number of persons convicted in the Supreme Court has been twenty. The Police Department is in charge of a Tongan Minister who is also the Public Prosecutor. The Tongan Police, when called upon to do so, assist His Britannic Majesty's High Commissioner's Court in making arrests and enforcing judgments. The Minister of Police is also in charge of prisons. There is one main prison in Nukualofa, at which all long-sentence prisoners are confined. There is also a gaol in Haapai and in Vavau.

Prisoners are employed on road making and other public works and in making copra and planting on Government plantations.

## VII.—PUBLIC WORKS.

A Treasury and Customs building was erected during the year at a cost of approximately £8,000. No other work of interest was carried out.

## VIII.—PUBLIC HEALTH.

The year was one of progress in matters of public health. The Tongan Government have agreed to co-operate generally in carrying out the Resolutions adopted at the International Pacific Health Conference held at Melbourne in December, 1926, and a new Quarantine Law has been passed. Thirteen Tongan lepers have been transferred to the Leper Asylum of the Fiji Government at Makogai. The Central Medical School to be established in Fiji for the training of native medical practitioners has received the unqualified support of the Tongan Government. The campaign for the erection of cement latrines throughout the islands is progressing steadily, and the work has been completed in two of the three main groups. A provision of £2,500 was made in the Estimates to improve the water supply. There are no rivers or streams in Tonga, and the rainwater supply is conserved in tanks. It is proposed to improve and add to the existing cement tanks in the villages. This campaign is an essential corollary to the latrine campaign.

Apart from an influenza epidemic, of a mild nature, the incidence of sickness throughout the year was light.

There are three hospitals in Tonga. The main hospital at Nukualofa is well equipped. It consists of European and Tongan wards, in separate buildings, and a dispensary. The other hospitals are in Haapai and Vavau. They are suitable for local requirements.

The Medical Department consists of four European medical officers, an ankylostomiasis officer, a European nurse, and a Tongan staff. The Tongans receive free medical attention. The Government pay a retaining fee to a dentist, and the Tongans receive free treatment in cases of extractions and temporary stoppings. They are also treated freely for pyorrhœa, the incidence of which is heavy.

Provision was made for an expenditure of £9,990 on medical and health services. This sum is equivalent to 11.86 per cent. of the total estimated expenditure of the financial year.

The following figures show the vital statistics for the five years ending the 31st December last :—

<i>Year.</i>					<i>Number of Births.</i>	<i>Birth-rate.</i>
1923	...	...	...	...	806	33.21
1924	...	...	...	...	858	35.90
1925	...	...	...	...	866	35.60
1926	...	...	...	...	910	35.80
1927	...	...	...	...	976	37.65
					<i>Number of Deaths.</i>	<i>Death-rate.</i>
1923	...	...	...	...	554	22.68
1924	...	...	...	...	443	18.40
1925	...	...	...	...	592	24.35
1926	...	...	...	...	377	14.84
1927	...	...	...	...	297	11.07

The infant mortality rate for the year was extraordinarily low, viz., 37.90 per 1,000 births. Comparative figures of this rate are as follows :—

<i>Year.</i>								<i>Rate.</i>
1923	...	...	...	...	...	...	...	136.40
1924	...	...	...	...	...	...	...	135.20
1925	...	...	...	...	...	...	...	295.60
1926	...	...	...	...	...	...	...	102.19
1927	...	...	...	...	...	...	...	37.90

The estimated Tongan population at the end of the year was 26,597, an increase of 679 during the year.

### IX.—EDUCATION.

Education is compulsory for all Tongans between the ages of six and fourteen years. The schools, in the Education Act, are divided into three types—primary, middle, and high. In the primary schools elementary education on a vernacular basis is provided. There are 73 Government and 36 denominational primary schools. The average daily attendance throughout the year was 4,946. These schools are subject to inspection. The buildings of the Government primary schools are provided by the taxpayers of the village. Education is free. Instruction is given in the three R's, singing, and needle work.



Middle schools are provided for in the Act for the purpose of providing an elementary education in English. It has not yet been found possible to establish any of these schools.

The High schools provide a general secondary education. The principal High schools are the Government College, Tubou College, and the Roman Catholic School in Tongatabu. These schools are residential.

The staff at the Government College consists of three Europeans and five Tongans. The ordinary academic instruction is given and pupils are taught the correct methods of growing native crops at the College plantation. The number of pupils at the College averages 170.

The Director of Education, who is also Principal of the College, conducts an annual course of instruction for head teachers in the primary schools during the long vacation. Evening classes in English for non-collegiates are also conducted throughout the year.

Tubou College is a Wesleyan Mission School which, in addition to its academic work, prepares teachers for the church primary schools. There are 61 pupils resident at the College. A European clergyman is in charge.

Games play an important part in the life of the colleges and the standard is high. The Tongan is a keen rugby footballer and a particularly good tennis player.

The college brass bands are an interesting feature of Tongan school life. The pupils respond readily to training.

Secondary education for girls, apart from missionary effort, is undeveloped.

A scholarship scheme was inaugurated during the year, under which Tongan students from the colleges will proceed abroad for secondary and university education. The value of the scholarships will not exceed £150 and £200 at secondary schools and the University respectively. It is intended to limit the number of scholars, at any one time, to five, and the scheme will be introduced gradually. One scholar was elected, after competitive examination, during the year and he has entered a public school in Australia.

## **X.—LANDS AND SURVEY.**

The Tongan land system is, in many respects, unique. All land is the property of the Crown, but large estates have been divided out among the nobles. Every Tongan, when he attains the age of sixteen and thereby becomes a taxpayer, is entitled to a tax allotment of 8½ acres in the bush and a town site. He obtains the grant on application to the Minister of Lands. He pays an annual rental of 8s. for his tax allotment and no rent for his town site. The Minister grants the allotment out of the estate of the noble on which the applicant resides, and if land is not available a grant of Government land is made. Provision is made in the

law for ejectment for non-payment of rent or for failing to comply with the planting laws. The interest of Tongans in land, whether they are the holders of hereditary estates or of tax allotments, is a life interest and alienation is expressly forbidden. Leasing is subject to Government control. Devolution is specially provided for.

It is a curious fact that many Tongans do not take advantage of their statutory right to land. At the beginning of 1927 there were 5,545 allotments held and 703 taxpayers had not applied for allotment. This latter class live in the towns or on their father's cultivated allotment to which they hope in time to succeed. No Tongan can hold two tax allotments and this fact, together with the neglect of taxpayers to apply for an allotment, retards economic development. The law provides that a Tongan may, instead of applying for a tax allotment, with its definite area, apply for an ordinary lease. This is a new phase of the law and it is not possible as yet to state how it will in fact operate. An allotment holder may also be granted a lease and a condition precedent to grant is a well-cultivated allotment. Though, in law, the area of the statutory allotment is limited to  $8\frac{1}{2}$  acres, instances are numerous in which this area is exceeded. The reasons for this departure from the theory of the system may be historical—the area held representing an old feudal grant.

It is beyond the limits of this report to sketch, except in the barest outline, this interesting system. It is incapable of precise legal definition. It is simple in its operation though its examination obscures its simplicity. It is an example of a system grafted upon the polity of a native people, a creature of law rather than of custom.

The survey work performed by the Government surveyors during the year consisted in defining hereditary estates and in demarcating tax and town allotments. Lease surveys were also executed.

## **XI.—LABOUR.**

The number of labourers employed in Tonga is negligible. There are a few Solomon Islanders, Fijians, and Indians working on plantations or in the stores. The wages of these labourers averages £5 a month, with food. The Tongans labour at irregular intervals. They receive approximately 8s. a day and they are difficult to obtain. Tongan girls are employed as house servants at a wage of £2 10s. to £3 a month. A good cook is unobtainable in Tonga and it is necessary to introduce them from Fiji.

## **XII.—METEOROLOGICAL.**

The climate of the Tongan Group from May to November is good for the tropics. The thermometer rarely registers higher than 80 degrees and the humidity, during these months, is, as a rule,

relatively low. During the wet season, from December to April, the temperature rarely rises above 90 degrees, but the humidity is high. The wet season is trying for Europeans. There is, however, no malaria.

The climate throughout 1927 was abnormal, as the relative humidity remained high throughout the year. The rainfall was two points above the general average.

The following figures set out the meteorological summary for the year. As regards humidity, the maxima and minima shown are as observed at 9 a.m. The highest humidity recorded was 98 per cent. on the 12th January. The temperatures shown are the true extremes as the instruments used are self-recording.

<i>Month.</i>	<i>Bar.</i>	<i>Dry Bulb.</i>	<i>Wet Bulb.</i>	<i>Rel. Hum.</i>	<i>Max.</i>	<i>Min.</i>	<i>R'fall.</i>	<i>Wind.</i>
January ...	29.806	79.1	75.2	82.6	82.9	73.6	16.15	SE
February ...	29.792	81.8	75.6	74.3	85.4	73.8	4.67	E
March ...	29.909	82.0	76.9	78.6	85.7	75.1	5.01	SE
April ...	29.901	81.1	75.1	74.5	84.2	72.4	4.31	SSE
May ...	29.732	77.0	72.3	79.0	81.0	70.9	17.80	SE
June ...	30.018	73.5	69.3	79.4	78.6	66.2	2.45	SE
July ...	30.017	72.9	66.0	76.4	79.0	66.1	2.44	SSE
August ...	30.002	73.7	69.0	78.3	77.8	66.8	3.29	SSE
September ...	30.053	74.1	68.2	72.8	77.6	66.8	3.17	SE
October ...	29.997	76.2	70.6	74.5	79.4	69.2	4.74	SE
November ...	29.908	77.0	71.8	73.2	79.5	70.9	4.81	SE
December ...	29.828	80.7	75.6	77.8	83.1	73.1	5.55	E
Means ...	29.730	77.4	72.1	76.8	81.2	70.4	74.39	SE

J. S. NEILL,

*His Britannic Majesty's Agent and  
Consul, Tonga.*

NUKALOFA, TONGA.

29th February, 1928.

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No. 1389

# NYASALAND

## REPORT FOR 1927

*(For Report for 1925, see No. 1296, price 6d.)*



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# NYASALAND.

## ANNUAL GENERAL REPORT FOR THE YEAR 1927.

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### Geography.

The territory comprised in the Nyasaland Protectorate is a strip about 520 miles in length and varying from 50 to 100 miles in width. It lies approximately between latitude S.  $9^{\circ} 45'$  and  $17^{\circ} 16'$  and longitude E.  $33^{\circ}$  and  $36^{\circ}$ . The area is roughly 40,000 square miles or about one-third the area of the British Isles. The most southerly portion of the Protectorate is about 130 miles from the sea as the crow flies.

This strip falls naturally into two divisions : (1) consisting of the western shore of Lake Nyasa, with the high tablelands separating it from the basin of the Luangwa river in Northern Rhodesia, and (2) the region lying between the watershed of the Zambesi river and Shire river on the west and the Lakes Chiuta and Chilwa and the river Ruu, an affluent of the Shire, on the east, including the mountain systems of the Shire Highlands and Mlanje and a small portion, also mountainous, of the south-eastern coast of Lake Nyasa.

The Protectorate is divided for administrative purposes into four Provinces, the Zomba, Southern, Central, and Northern, each of which is in the charge of a Provincial Commissioner. Each Province is subdivided into districts in the charge of Residents.

The chief towns are Blantyre, with about 300 European inhabitants. Limbe near Blantyre, and Zomba, the seat of the Government.

### Historical.

Very little is known of the history of the region now called Nyasaland before the middle of the past century. Jasper Bocarro, a Portuguese, is said to have been the first European to visit Nyasaland; he appears to have travelled early in the 17th century from the Zambesi to the junction of the Ruo and Shire rivers and thence via Lake Shirwa and the Lujenda river to the coast at Mikan-dani.

The real history of Nyasaland begins with the advent of Dr. Livingstone, who, after experiencing considerable difficulty in ascending the Shire, discovered Lakes Shirwa and Pamalombe, and on 16th September, 1859, reached the southern shore of Lake Nyasa. Livingstone was closely followed by a Mission under Bishop Mackenzie, sent out by the Universities of Oxford and Cambridge. The Mission settled in the Shire Highlands, but, on account of loss of its members by sickness and otherwise, it withdrew in 1862. It was subsequently re-established in 1881 on Lake Nyasa, with headquarters on the island of Likoma, where it still remains.

In 1874 the Livingstonia Mission, named in honour of the great explorer, was founded by the Free Church of Scotland. They were joined in 1876 by the pioneers of the Church of Scotland Mission, who chose the site of the present town of Blantyre and established themselves in the Shire Highlands, while the Free Church applied itself to the evangelization of the inhabitants of the shores of Lake Nyasa.

The Missions were followed by the African Lakes Corporation, and in 1883 Captain Foote, R.N., was appointed first British Consul for the territories north of the Zambesi, to reside at Blantyre.

A serious danger had arisen in connection with Arab slave traders who had settled at the north end of Lake Nyasa. At the time of Livingstone's first visit he found the Arabs established in a few places on what is now the Portuguese shore of the Lake and at Kota-Kota on the west side. Arab caravans, trading with the tribes in and beyond the valley of the Luangwa, were in the habit of crossing the Lake on their way to and from the sea coast. Opposition of the new settlers to the slave trade carried on by Arab coastmen and natives alike resulted in a conflict with the

Arab traders under Chief Mlozi, settled at the north end of Lake Nyasa, which spread to the Yao chiefs, who were under their influence.

In the summer of 1889 the late Mr. Johnston (afterwards Sir H. H. Johnston, G.C.M.G., K.C.B.) arrived at Mozambique as H.B.M. Consul and proceeded to travel in the interior to inquire into the troubles with the Arabs.

Treaties having been concluded with the remaining Makololo chiefs and with the Yaos round Blantyre, Mr. Johnston proceeded up Lake Nyasa, leaving Mr. John Buchanan, Acting-Consul, in charge, who, after the first encounter between Major Serpa Pinto and Mlauri, a powerful Makololo chief, proclaimed on 21st September, 1889, a British Protectorate over the Shire districts.

In 1891 an Anglo-Portuguese Convention ratified the work of Mr. Johnston, Mr. Sharpe (now Sir A. Sharpe, K.C.M.G., C.B.), and other pioneers of British Central Africa, and in the following spring a British Protectorate over the countries adjoining Nyasa was proclaimed. The Protectorate of Nyasaland, under the administration of an Imperial Commissioner, was confined to the regions adjoining the Shire and Lake Nyasa; the remainder of the territory under British influence north of the Zambesi being placed, subject to certain conditions, under the British South Africa Company.

On 22nd February, 1893, the name of the Protectorate was changed to "The British Central Africa Protectorate," but the old name "Nyasaland Protectorate" was revived in October, 1907, by the Order in Council which amended the Constitution.

### **Climate.**

The climate of Nyasaland in its essential features is similar to that of the rest of Eastern Africa within the tropics.

The climate is necessarily diversified in various districts, owing to variations in latitude, altitude, and general configuration of the terrain, presence or absence of rivers, forests, etc., but, as a large proportion of the Protectorate lies at an altitude of 3,000 feet or more, the heat is not generally excessive. The monsoon commences to blow strongly in September, in conjunction with the sun's increase in southerly declination, and the first rains may be expected any time after mid-October. From their commencement to the end of December it is usual to experience violent thunderstorms and heavy precipitation in a few hours, followed by an interval varying from one to fifteen or twenty days of intense heat. With the return of the sun from its southern limit of declination, the thunderstorms diminish in intensity and frequency, and are replaced by steady rain—January, February, and March being usually the wettest months as regards duration of rainfall

as well as actual amount. After March the frequency and intensity of rainfall diminish rapidly and from May to September the climate is comparatively cool and dry.

### **Languages.**

The principal language spoken in the Protectorate is Nyanja, which is understood by most tribes throughout the country and is the official language which all civil servants are expected to learn. Other languages in use in various parts of Nyasaland are Yao, Nguru (which is spoken chiefly by natives who have immigrated from Portuguese East Africa), Tumbuka, Tonga, and Nkonde, the last three practically confined to the Northern Province. Swahili is spoken to a limited extent, chiefly by Mohammedan Yaos.

### **Currency, etc.**

The currency of the Protectorate consists of English coinage, gold, silver, and copper, but there is no note issue and notes of other parts of the Empire are not legal tender. During the year the question was raised of adopting the cental coinage already in use in East Africa, but the matter is still under consideration and no decision has been reached.

The weights and measures in use are also the ordinary English units, although there is an increasing tendency to use the short ton of 2,000 lb. The only two Banks operating in Nyasaland are the Standard Bank of South Africa and Barclay's Overseas Bank, formerly the National Bank of South Africa.

## **I. GENERAL.**

His Excellency, in opening the 34th Session of the Legislative Council on the 11th of May, referred to the outstanding land problems and expressed his disappointment that he had not been able to effect a settlement of them during his recent visit to England. He outlined the provisions of a Bill which had been prepared to reserve to the native community certain lands which would be proclaimed and vested in a Native Lands Board without whose consent none of it could be alienated. The revenues of the Board would be devoted to expenditure specially ear-marked for the benefit of the native community.

As far as non-native lands were concerned the main obstacle to a settlement was the position of natives on freehold estates. The problem, which is one of extreme intricacy, was the subject of negotiations between the Secretary of State and representatives of the various landowners. The view taken at the Colonial Office was that the various land questions of the Protectorate were so interlocked that it was difficult to decide any of the outstanding questions apart from a general settlement, and that this applied also

to the terms and conditions of Crown leases both of agricultural holdings and of township plots. None of the land questions had been settled at the end of the year, although the Natives on Private Estates Bill reached the Committee stage in Legislative Council.

During the year a special Commission visited Nyasaland and made exhaustive enquiries and investigations into the economic potentialities of the Protectorate, and into the physical features of the country in connection with proposed railway extensions, and investigations were also carried out into the possibility of re-opening the Upper Shire river to navigation and into the questions of harbours and railway termini at the southern end of Lake Nyasa.

Negotiations have been proceeding between the Nyasaland Government and those of Southern Rhodesia and Portuguese East Africa for the construction of a road to join Blantyre with Salisbury by way of Tete and by the end of 1927 there was every reason to hope that the road would soon be completed, thus bringing Blantyre within two days' reach of Salisbury by motor-car. Enquiries were also being made as to the best means of linking up Northern Nyasaland with the "Great North Road" from Broken Hill to Nairobi via Fife.

A change of some importance was made during 1927, by which the financial year which formerly began on the 1st of April was made to synchronise with the ordinary calendar year. In order to bring about this change the financial year beginning on 1st April, 1927, was reduced to a period of nine months.

Lieut.-Colonel Davidson-Houston succeeded Mr. Rankine as Chief Secretary to the Government and assumed duty in November.

## II. FINANCE.

The following table shows the revenue and expenditure during each of the past five financial years :—

<i>Year.</i>	<i>Revenue.</i>	<i>Expenditure.</i>
	£	£
1923-24	281,044	282,800
1924-25	293,055	295,481
1925-26	322,160	303,205
1926-27	348,320	318,899
1927 (April-December)	346,341	266,519

The excess of assets over liabilities at the end of each of the above periods was :—

	£
31st March, 1924 (excess of liabilities) ...	7,704
31st March, 1925 (excess of assets) ...	5,970
31st March, 1926 (excess of assets) ...	24,926
31st March, 1927 (excess of assets) ...	54,347
31st December, 1927 (excess of assets) ...	134,169

The public debt of the Protectorate as at the 31st December, 1927, was as follows:—

<i>Loan.</i>	<i>Total Loan received.</i>	<i>Interest &amp; Annuity Charges paid in 1927.</i>	<i>Unredeemed balances.</i>
	£	£	£
Shire Highlands Railway:—			
Subsidy Lands ... ..	180,800	3,793	150,972
East African Protectorate:—			
Loan 1915 ... 4 per cent.	12,000	—	42,648
do. ... 6 per cent.	33,348		
Trans-Zambesia Railway Guarantee and Annuity Loans 1921-27:—			
January Issues (Plus Interest 1927, £9,660)	195,000	—	202,860
March Issues ... ..	210,550	—	194,503
July Issues ... ..	125,000	6,250	125,000
June Issues ... ..	25,000	—	25,000
December Issues ... ..	25,000	—	25,000
Loan in Aid of Famine Relief, 1924	20,000	—	18,739
	<hr/> £826,698	<hr/> 10,043	<hr/> 784,722

It will be seen from the second of the tables printed above that a deficit of £7,704 on the 31st of March, 1924, has been changed into a surplus balance of £134,169 on the 31st of December, 1927, and this fortunate result must be mainly ascribed to the general progress made by the Protectorate in recent years. Since 1922 the European population has increased by 20 per cent. and the taxable income of the community has risen from £424,000 to £751,000. The opening of the Trans-Zambesia Railway and the large extension of the roads available for motor traffic have provided means for disposing of produce which were not yet in existence a few years ago. This again has reacted on the earning capacity and purchasing power of the native community, and the increases of revenue are shown under Customs, Hut Taxes, Licences, Postal Receipts, and other heads.

Certain amendments were made in the Customs Schedule during 1927. The provision by which the cost of packing and outside packages were deducted from the value of goods was abolished owing to the difficulty experienced in checking the accuracy of statements made by importers. Several articles were added to the list of building materials which are allowed in at the lower rate of 10 per cent. *ad valorem*. These additional articles included rod and bar iron, door and window fittings, flat and corrugated iron, painters' colours, roofing material, timber, and wire netting.

The duty on sewing machines was increased from 15 to 25 per cent. *ad valorem* or to a duty of twenty shillings, whichever is the greater. This provides a means of taxing to a certain extent the wealthier type of native, who would otherwise escape with no higher taxation than that paid by the ordinary labourer.

As a result of these alterations in the Customs Schedule an increase of £1,150 in revenue was anticipated.

A minor amendment to the Schedule was made in August by which the horse-power of cars that may be imported free of duty was raised from 15.6 to 15.9 as experience has shown that the latter is a more convenient limit.

### III.—PRODUCTION.

#### Agriculture.

*Cotton.*—In 1922 the area of cotton planted by Europeans was 26,545 acres; in 1927 it was 2,545 acres, and during the present season it is anticipated that not more than 1,000 acres of cotton will be planted. The rapid fall in the acreage planted with cotton by Europeans in Nyasaland is a matter for regret, but with the fall in prices and low yields European cotton must tend to be more and more confined as a main crop to the lower and less healthy elevations of the country, although as a rotation crop it has advantages in mid-elevations.

In 1927, Europeans produced 82 tons of lint cotton and natives produced 416 tons; the percentages of the total being 16.53 and 83.47 respectively. Native production fell from 2,909 tons of seed cotton in 1925 to 1,387 tons in 1927. The falling off in native production must be ascribed to the drop in prices, and with a rise in home values increased production by natives may be confidently expected.

*Tobacco.*—The country continues to be more and more dependent on tobacco as its staple export product, and in 1927 tobacco accounted for 8,166 tons out of the total of 10,361 tons of export crops produced. Both the European and the native crop for the year far exceeded all previous figures. Europeans produced 4,682 tons or 57.34 per cent. of the total and natives produced 3,484 tons or 42.66 per cent. of the whole crop.

The buying season opened with excellent prices for bright tobaccos, but towards the middle of the season prices fell and planters experienced great difficulty in disposing of this class of tobacco. Much anxiety was felt at the depressed condition of the home market. Dark tobaccos, on the other hand, were absorbed more readily than was anticipated. The state of the home market has created a feeling of the importance of extending the consumption of Empire-grown tobacco to cope with the increased production due to Imperial Preference.

The tendency in regard to the production of native tobacco is downwards, but at the same time the industry is becoming more stable as the better type of producer will continue in the industry, while those whose zeal was only temporary and those who hoped to make money easily by growing tobacco will drop out of the

business because of their disappointment at the fall from the abnormal prices realised the previous year.

*Tea*.—This crop continues to expand and in 1927 there was an increase of 1,282 acres under tea as compared with 1926. The position is healthy, prices are satisfactory, and the prospects continue to be good.

*Sisal*.—There was a considerable expansion in the production of this crop, due to increased development, and the amount exported rose from 529 tons in 1926 to 801 tons in 1927.

*Coffee*.—It must be admitted that the long, dry spell in Nyasaland is not ideal for the production of coffee, but the area under this crop increased from 424 acres in 1924 to 1,239 acres in 1927. This increase, however, gives no grounds for assuming that this crop will ever be restored to its former importance.

The following table shows the annual exports of the principal products in quantities and values during each of the past five years :—

	1923.		1924.		1925.		1926.		1927.	
	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Tons.	£
Tobacco	2,303	257,998	3,145	352,348	3,088	345,872	4,081	457,122	6,905	780,964
Cotton...	924	85,649	995	120,564	1,023	96,245	1,377	93,243	826	45,834
Sisal ...	747	15,425	799	18,015	785	19,388	529	16,799	801	24,428
Tea ...	430	39,934	473	57,046	516	64,242	528	62,675	522	56,640
Coffee ...	41	2,305	21	1,768	9	768	25	2,174	16	1,203

### Veterinary.

Trypanosomiasis of cattle continues to be the cause of the majority of the deaths from disease, owing to the large tracts of country infested by tsetse fly (*Glossina morsitans* and *Glossina brevipalpis*) and to the economic necessity of moving cattle for transport purposes and the supply of slaughter animals for the food of man. A scheme which was initiated during 1925 to attempt to prevent the southward spread of tsetse fly in the Central Province is being vigorously extended and there seems to be some hope of the policy which is being pursued yielding favourable results.

East Coast Fever has been confined to the Central and Northern Provinces, where a scheme for the provision of dipping facilities is being gradually extended from the south into this area with a view to controlling all tick-borne diseases.

There have been no large outbreaks of epizootic diseases during the year. Anthrax, blackquarter, demodectic mange, and streptothricosis of cattle, and also rabies have been well under control.



Rinderpest occurred in the neighbouring district of Tanganyika, near our northern border, but the protective measures in force were sufficient to prevent any extension of this disease into Nyasaland.

The numbers of domestic animals killed by wild carnivora in the Northern Province are 20 per cent. greater than the numbers who die from disease. In one district in which a register of all cattle is kept 737 head were killed by wild carnivora during the past two years.

There has been a steady increase in the number of live stock and also in the interest of European owners in improving the quality of the animals they breed. Nineteen bulls and nineteen cows of various pedigree strains have been imported from Great Britain and South Africa by European settlers since the last report was published.

The consumption of meat by the native population is steadily increasing in the areas in which economic production by natives has been developed.

### **Forestry.**

During the year, five new Forest Reserves were proclaimed, having an aggregate area of 217 square miles.

This brings the total number of Reserves up to 32, with a total area of approximately 2,969 square miles.

Forest protection has made great advances under the District organisations of forest guards supervised by native foresters, and most of the population throughout the Protectorate are now conversant with the main forest laws and with forest-reserve boundaries in their Districts.

A great deal of work has been undertaken by the Department in ascertaining the distribution and composition, by species, of the various "savannah" types which compose the forests of the country.

In addition to the creation of 32 Forest Reserves a commencement has been made in the demarcation of small, widely-scattered areas of forest for dedication to the communal use of the villages in their vicinity, with the object of trying to maintain a sustained yield of building poles and fuel for the needs of the people. It is intended that the people themselves should protect and manage these "village forest areas" under simple rules provided by the District Administration (Native) Ordinance, supplemented by a certain amount of supervision and advice from the Forestry Department.

In localities where insufficient natural forest remains for the allocation of effective "village forest areas," villagers are being encouraged to form communal plantations, and for this purpose plants are distributed (in many districts) free of charge from Government nurseries, the departmental staff giving advice and assistance whenever possible. During the year, 50 areas of

indigenous forest totalling 5,017 acres were demarcated and allocated to villages and over 200 additional areas were demarcated and prepared for planting up during the rainy season.

Additional areas were planted up by the Department under afforestation schemes at Zomba, Limbe, Mlanje, and Dedza, and a certain amount of experimental planting was undertaken.

Systematic tending and thinning of plantations continues to receive the close attention which successful management demands and in most cases thinnings realized satisfactory prices.

Departmental exploitation of the Mlanje cypress forests was continued throughout the year for supplying timber to the Public Works Department, and adequate stocks of sawn timber were made available.

As in the two preceding years a course of instruction was held in Zomba for native foresters, and foresters from all Districts attended as well as a few recruits. These courses are proving of great value in building up an efficient subordinate staff.

Timber and forest produce was sold to the public under the licence system as in the past, and forest revenue showed a satisfactory increase during the year.

Advice on forestry matters was given to the public whenever asked for either by letter, interview, or whenever possible by personal inspection.

#### IV.—TRADE AND ECONOMICS.

Trade conditions during 1927 were very satisfactory, and the total volume of external trade reached the record figure of nearly two and a quarter millions sterling, an increase of over a hundred per cent. since 1923. The balance of trade, too, turned once again in favour of exports.

The principal contributory cause of the general improvement in trade was the development of the tobacco industry, both European and native, the production for the year being nearly twice as much in weight as the previous largest crop. The increasing wealth of the country due to the expansion of the tobacco and other staple crops is reflected in the continuous increase in the value of imports of a capital nature such as machinery, agricultural implements, and iron and steel manufactures. The importation of heavy lorries for service as feeders to the railway increased in numbers by nearly 150 per cent. over 1926.

A notable change in the incidence of imports has taken place in the last five years. Goods imported for European consumption have increased in value from about 45 per cent. of the total to 57 per cent.; the native trade has declined from over 50 per cent. to 38 per cent., while the percentage of Asiatic imports has remained constant at about 5 per cent.

Native trade was not so good as had been anticipated earlier in the year, probably as a result of the decline in cotton production. There appears to be a smaller demand for long cloths and similar

cotton manufactures and an increase in the demand for ready-made khaki drill and other clothing, blankets, and felt hats, as well as for cheap hardware, sewing machines, and bicycles.

The volume of trade, domestic imports and exports (excluding Government imports), and goods in transit, is shown below for each of the last five years :—

<i>Year.</i>						<i>Volume of Trade.</i> £
1923	...	...	...	...	...	1,023,359
1924	...	...	...	...	...	1,278,407
1925	...	...	...	...	...	1,294,300
1926	...	...	...	...	...	1,637,729
1927	...	...	...	...	...	2,206,438

As compared with 1926, the trade volume of the year may be analysed as under :—

	<i>1927.</i> £	<i>1926.</i> £	<i>Increase.</i> £
Imports ... ..	938,461	791,054	147,407
Exports ... ..	960,869	671,086	289,783
Transit Inwards ... ..	127,147	75,331	51,816
Transit Outwards ... ..	179,961	100,258	79,703
	<u>£2,206,438</u>	<u>£1,637,729</u>	<u>£568,709</u>

Exports exceeded imports in 1927 by £22,408, whereas in 1926 imports exceeded exports by £119,968.

The importation of manufactured articles increased by £139,093 or 21.3 per cent. over that of the previous year, the most noteworthy item being vehicles and parts which increased in value by £71,209 or 99.7 per cent. Commercial power-lorries and tractors increased by 129 to 220, of which 92 or 41.8 per cent. were of United Kingdom manufacture. The number of touring cars imported was 136 of which 80 or 58.8 per cent. were of United Kingdom manufacture. This was one car less than in 1926, but the value of car imports increased by £2,531. The increase in the number of motor vehicles was naturally reflected in the larger quantity of motor spirit imported, the total for the year being 394,864 gallons, showing an increase of 141,861 gallons.

Cotton manufactures to the port of shipment value of £275,954 were imported during the year, a decline of £30,909 equal to 10 per cent. This is partly due to the lower home cost and partly to the greater demand for ready-made clothing.

Although the United Kingdom continues to supply Nyasaland with its highest proportion of direct imports, this percentage is certainly falling, and during the last year it has declined a further 2 per cent. The main reason appears to be the apparent indifference of British merchants as compared with the activity of foreign

agents. Imports of Japanese and Czechoslovakian manufacture, purchased in Beira and India, are increasing as also are direct imports from the United States of America. The combined direct and indirect trade in Empire manufactures constituted 74 per cent. of the total imports in 1927, as against 75 per cent. in 1926 and 77 per cent. in 1925.

The most valuable single item in the import trade of the Protectorate is cotton manufactures, and the following table shows how this business is being lost to the United Kingdom.

Year.	Total Value.	From United Kingdom.		From India.		From Other British Possessions.		Foreign Countries.	
	£	£	%	£	%	£	%	£	%
1925	259,074	108,843	42·0	73,438	28·4	17,614	6·8	59,179	22·8
1926	306,863	108,563	35·38	66,634	21·71	9,016	2·94	122,650	39·97
1927	275,954	62,257	22·56	95,446	34·59	7,272	2·63	110,979	40·22

Taking the port of shipment value of the direct consignments of domestic trade imports the following is the position :—

Year.	United Kingdom.		British Possessions.		Foreign Countries.	
	£	%	£	%	£	%
1925 ...	295,844	50·0	139,325	23·5	156,482	26·5
1926 ...	353,334	44·66	163,923	20·73	273,797	34·61
1927 ...	410,659	43·76	211,065	22·49	316,737	33·75

Since 1925, direct imports from the United Kingdom have declined by 6.24 per cent., those from British Possessions by 1.01 per cent., while those from foreign countries have increased by 7.25 per cent.

Outside of the United Kingdom, the only parts of the Empire which contributed any appreciable quantity of the domestic imports were : India with 12.78 per cent. of the total, chiefly cotton goods; South Africa with 4.5 per cent.; and Southern Rhodesia with 3.85 per cent. Of the foreign countries, Portuguese East Africa supplied 13.6 per cent. of the total domestic imports, chiefly motor spirit, paraffin, cotton manufactures, salt, and sugar; the United States supplied 6.26 per cent., mainly cotton manufactures; Germany 5.67 per cent., cotton goods, beads, hoes and hardware; Holland 2.95 per cent., blankets, cotton goods, fertilisers, and beads; Japan 1.29 per cent.

As regards export trade, the most important fact of the year is the enormous increase in the quantity of tobacco produced, even when compared with the previous record production of 1926. The

chief cause of this increased development in the tobacco industry is undoubtedly the stabilised Imperial Preference. Practically the whole of the tobacco crop is shipped to Great Britain and it constituted over 30 per cent. of the United Kingdom imports of Empire-grown tobacco during 1927. The net export of tobacco was 6,905 tons as compared with 4,082 tons in 1926, an increase of 69.1 per cent.

The fall in home market prices had an adverse effect on cotton production, and only 826 tons were shipped in 1927 as against 1,377 tons in 1926.

Delayed rains at the end of the year affected the export of tea, 522½ tons being exported as compared with 528 tons in the previous year.

Sisal exports reached the record figure of 801 tons, an increase of 272 tons or 51.4 per cent. over 1926.

The total exports from the Protectorate weighed 9,820 tons and were valued at £960,869, as against 6,884 tons valued at £671,086 in 1926. The increase in weight was 42.66 per cent. and in value 43.18 per cent.

The United Kingdom took 97.19 per cent. of the total exports of domestic products by weight and 99.3 per cent. of the total by value. It will thus be seen that the exports to British Possessions and foreign countries are negligible.

## **V.—COMMUNICATIONS.**

### **Shipping.**

Except for the steamers of the British India Line which maintain a regular mail service, there are no fixed sailing dates from Beira and passengers are often kept waiting some days at that port awaiting the departure of the ship on which they are booked. Similar delays occur on the inward journey, as there is only one regular train a week from Beira to Blantyre, although a mid-week or special train is occasionally run. The voyage from England to Beira takes about thirty days by mail steamer and from five to six weeks by other vessels.

### **Railways.**

There are three separate railway systems to be passed over on the journey from Beira to Blantyre, although they are all under one management. These are the Trans-Zambesi Railway from Beira to Murraca on the south bank of the Zambesi. Passengers and cargoes cross the river by a steamer-ferry, for as yet there is no bridge. From Chindio, opposite Murraca, the Central African Railway runs to Port Herald, and the Shire Highlands Railway continues from the latter place, the port of entry into the Protectorate, to Blantyre. The journey normally occupies two days, passengers sleeping the intervening night on the ferry steamer.

### **Roads.**

At the end of the War, the use of heavy lorries was impossible except on the Blantyre-Zomba road, motor traffic elsewhere being restricted to light American cars. Bullock carts were in use to a certain extent, but human portage was still the most usual method of transport. A definite policy of road improvement was of necessity inaugurated to meet the changing conditions, and to open up new areas of the Protectorate. By 1920 the North Charterland Exploration Company were able to maintain a regular service of Reo lorries between Limbe and Dedza, whence they transported the export produce carried from Fort Jameson by ox-wagon.

During the past eight years the 46 miles of road open to motor-lorries has been developed into a main-road system consisting of 85 miles of metalled road and 834 miles of earth road, the latter being available, except during exceptionally wet periods, for motor-lorries of a gross weight of four tons.

The consequent increase in the use of motor transport has been one of the most important factors in the expansion of trade in the Protectorate. The quantity of goods carried over the Shire Highlands Railway has increased from 22,500 tons in 1923 to 43,700 tons in 1927, and the development of motor transport can best be appreciated from the fact that the imports of petrol for local consumption have grown from 88,850 gallons in 1922 to 394,864 gallons in 1927.

The introduction of balloon tyres and the increase in the number of high-speed motor vehicles have caused a great deal of damage to roads, and it has been impossible to maintain a satisfactory surface even on the Zomba-Blantyre road. Unless the country is prepared to meet the cost of proper road-surfacing, it must face the prospect of increased trouble from the disintegrating effects of high-speed traffic on water-bound macadam roads.

During 1927, 142 miles of main road were opened to lorry traffic and the road system generally was satisfactory under increased traffic.

Generally speaking, the normal maintenance of the road system of the country was carried out in a satisfactory manner, some improvements of a more important nature being carried out from loan funds. During the year there was no flood damage of a serious nature. Among the planting community there is strong agitation in favour of the early opening of the roads to heavy traffic, but the rains are often late and the damage caused by the rain must be repaired before the roads can be opened for heavy lorries.

Except in remote districts, carrier transport has almost disappeared, and Nyasaland has the distinction of owning more motor vehicles in proportion to the white population than any other country in the world.

### **Postal.**

There was a continued increase of traffic in both the postal and the telegraph branches of the service.

The number of articles dealt with in the post was 2,411,672, an increase of 501,205 or 26.23 per cent. over 1926. Local letters numbered 551,720 in 1926 and 668,074 in 1927, the increase being due to penny postage which was introduced on the 1st of April, 1926. Dealers and collectors purchased stamps to the value of over £800, and excluding these the sale of stamps increased by 26.91 per cent.

All classes of telegraphic traffic showed a steady increase, and this is due in great measure to the installation of the Cape Town "beam" wireless system, which is cheaper than the cable service. Many telegrams to and from Kenya, Uganda, and Tanganyika Territory are now forwarded via the "beam" service. The increase in telegraphic traffic over 1926 is 30.08 per cent. There is no wireless transmitting station in the Protectorate, but a few people own receiving sets.

There was a considerable increase in the number and total value of money-orders issued, mainly due to the larger number of C.O.D. parcels received from England, although money-orders issued and paid in the Protectorate show a remarkable increase. Postal-order business remained about the same.

The only public telephone service is in Zomba and it is practically confined to the Government offices.

## **VI.—JUSTICE, POLICE AND PRISONS.**

The Police Force consists of 14 European officers and 474 African ranks. The cost of the Force for 1927 was £16,144.

### **Crime.**

Crime in the settled areas of the Southern and Zomba Provinces has shown a tendency to increase during the year, the main increases being offences against the person and property. There is very little serious crime in other districts.

### **Prisons.**

The established prisons of the Protectorate consist of a Central Prison at Zomba for long-sentence prisoners, at which various trades are taught, and 19 District prisons, situated at the head-quarter stations of each District, for short-sentence prisoners.

The Prison staff consists of two European officers and 125 African warders. The European officers are in charge of the Central Prison, and District prisons are under the supervision of administrative or Police officers, the whole being under the charge of a Chief Inspector of Prisons.

The total number of persons committed to the prisons during 1927 was 3,192, of whom 840 were for safe custody pending trial, six for debt, and 2,347 on sentence to imprisonment.

The cost of the prisons for 1927 was £4,995.

## VII.—PUBLIC WORKS.

The most important piece of bridge work undertaken during the year was the erection of a 75-feet steel girder bridge over the Lichenya River, at Mlanje. Apart from this, no public works were undertaken which had any great interest other than local. Extensive alterations to Government House were planned and partly carried out.

## VIII.—PUBLIC HEALTH.

The population of the Protectorate at the end of 1927 was estimated at 1,716 Europeans, about 900 Asiatics, almost wholly Indians, and 1,279,000 natives. About 1,014 Europeans and 151 Asiatics entered the country and 814 Europeans and 439 Asiatics left.

The health of the European community during 1927 was much the same as in 1926. One hundred and seventy-nine patients were admitted to the Government hospitals, as compared with one hundred and seventy-three in 1926. The out-patients numbered 715, as against 625 during 1926. Of these 894 European patients, 127 were treated for malaria, which is responsible for more sickness amongst Europeans than any other one disease. Diarrhoea and enteritis were next with 59 cases.

Amongst the native population, 3,127 cases were admitted to hospitals and 153,512 cases were treated as out-patients, as compared with 3,009 and 143,260 respectively in 1926.

Of these cases over 36 per cent. are more or less preventible diseases.

The commonest diseases were ulcers (some 24,000) and respiratory affections (nearly 21,000), whilst injuries of various kinds amounted to over 26,000 cases. Hookworm disease is very prevalent amongst the native population, although there were actually only some 2,090 persons treated.

The chief causes of death amongst natives in 1927 were infectious and epidemic diseases, respiratory affections, hookworm disease, injuries, and general diseases, each 16 per cent. of the recorded deaths.

Of the other diseases, no one disease exceeds 5 per cent. of the recorded deaths.

There were no serious epidemics during the year. There was a small outbreak of smallpox at Mlanje, but it was quickly controlled and there were only eleven cases.



### IX.—EDUCATION.

The new Department of Education came into existence in May, 1926. Before 1926, the education of the native population was entirely in the hands of the various missionary bodies, the first of which to take up work in Nyasaland was the Universities Mission to Central Africa, which opened a station near Zomba in 1860, soon removed to Zanzibar, and did not renew its activities in the country until 1881, when it opened its existing headquarters on Likoma Island in Lake Nyasa.

In 1875 the Free Church of Scotland and in 1876 the Church of Scotland began mission work on Lake Nyasa and at Blantyre respectively. Other missions followed until at present there are eleven separate religious bodies operating in Nyasaland. During the last twenty years the expenditure by missions on native education has increased from about £6,000 in 1907 to £41,525 in 1927. From 1908 to 1918 an annual grant of £1,000 a year was made by Government in aid of education. From 1918 to 1926 the grant was increased to £2,000 a year, divided proportionately among the missions in accordance with the educational work performed by them. In the year ended 31st March, 1927, the grant amounted to £2,300 and in the remaining nine months of the year it totalled £3,720, based on the number of qualified teachers and instructors and boarders receiving vocational training.

Ever since 1916, Government had been considering the question of increasing the grants to missions and the creation of a Department of Education, but the financial state of the Protectorate prevented any action being taken in the matter. In 1925, however, the formation of a Department was authorised by the Secretary of State and in 1926 it was inaugurated.

During the first six months after his arrival the Director of Education acquainted himself with existing educational facilities and conferred with the heads of the various missions and with others concerned with a view to securing their support and co-operation in a scheme of education. In October, 1926, the Fifth General Conference of the Federated Missions met at Blantyre and devoted two days to the consideration of educational matters, the discussion ranging over a wide field. As a result of this Conference, a decided advance was made in the standard of education.

In May, 1927, His Excellency the Governor convened a Native Education Conference at Zomba, at which the problem of education in Nyasaland was discussed and various committees were appointed to consider different aspects of the question. As a result of this Conference, all the missions, with the exception of the Universities Mission to Central Africa, definitely agreed to co-operate in the scheme put forward by the Education Department, while the Universities Mission has agreed to give the new code a trial. At this Conference it was unanimously agreed that manual work.

especially agriculture, as well as hygiene, sanitation, physical training and organised games, should find a place in the syllabus for every type of school.

During 1927, an Education Ordinance was passed which provided for the institution of a Board of Education to act as an advisory body on all educational matters, and for the appointment of Provincial and District School Committees to deal with local questions. The Board held its first meeting in August and discussed the proposed Rules under the Ordinance and the Rules were finally approved by Government in December.

In accordance with the provisions of the Education Ordinance, registers were compiled of all schools and teachers, and at the end of the year there were 2,788 schools with a staff of 4,481 native teachers. There were 91 full-time European teachers and technical instructors employed by the missions, and 63 engaged in part-time educational work. Third-grade certificates were awarded to 319 native teachers, and 214 honorary certificates were granted to native teachers with over twenty years' service. Vernacular certificates were also granted in 55 cases. Native teachers who were in the employment of missions, but who were unable to qualify for any of the above-mentioned certificates, will be granted licences to teach available for three years.

In 1926, the Department of Education drew up a code for village schools to replace the rudimentary instruction formerly given in them. The code was in the vernacular and comprised religious instruction, reading, writing, arithmetic, hygiene, agriculture, handicrafts, composition, drill, singing, and organised games; history and geography optional. By 1927 all the missions had accepted this code and an all-round improvement in village education should result from its use in all schools for which qualified teachers can be found. Central schools on mission stations under European supervision were given the village school code with the addition of English. At the headquarters of the Church of Scotland Mission, the Livingstonia Mission, and the Universities Mission, fully qualified Europeans are employed in training native teachers who undergo a full normal course, and the syllabus recommended by the Board has been adopted in these schools. In 1927 there were 300 students taking the full normal course. In addition to these, 383 teachers were attending training classes in connection with central schools at 14 mission stations.

There are approximately 15,000 Mohammedan children of school age in Nyasaland, and although there are numbers of Koran schools in existence they really correspond to church classes in Christian missions. By the end of 1927, the question of education to Mohammedans had not been finally settled.

The only large centre of female education is at Likoma, the headquarters of the Universities Mission to Central Africa, where there are about 500 native girls on the roll under three certified

European mistresses. In the village schools, the co-education system obtains in most missions and about 40 per cent. of the total on the rolls are girls. The Board of Education agreed that in the majority of schools co-education must continue for the present.

There are at present four private schools in Nyasaland at which education is given to European children, one each at Blantyre, Limbe, Zomba, and Mkhoma. The question of assistance towards European education has been under consideration for some time, and in 1927 grants-in-aid of private schools were sanctioned by Government at the rate of £600 a year. During the year, the child population increased very greatly from 69 over five years of age in April, 1926, to 95 over six years of age in December, 1927. The number of school children on the rolls of the four schools increased from 66 in 1926 to about 100 in 1927. The education at present given comprises kindergarten instruction followed by an elementary school education. It has been proposed that Government should establish a central school, and if that were done it would consist of three departments: kindergarten, elementary, and a preparatory school for boys who wish to take the Public Schools entrance examination at home.

### **X.—LAND AND SURVEY.**

During the year, 50 leases of Crown Land were issued, with a total acreage of 10,403 acres, as compared with 38 leases and 10,407 acres in 1926. The majority of the leases were for land for the cultivation of tobacco or for purposes connected therewith. On the other hand, six leases totalling 5,200 acres were surrendered, nearly all of these having originally been taken up for the cultivation of cotton.

Government made some important exchanges of land during 1927, namely, one of 6,848 acres at Mlanje for 8,650 acres at Malosa in the Upper Shire District, belonging to Malosa Estates, Limited; and another whereby Government acquired from Mr. T. M. Partridge various plots of land in or adjoining Limbe Township in exchange for 2,300 acres of land in the Lilongwe District.

The development of native trade is shown by the fact that 182 Yearly Tenancy Agreements were issued as compared with 113 in 1926, chiefly for trading sites and the purchase of native tobacco.

The number of surveys made during the year was 32, totalling 10,016 acres.

The Geological Survey Department investigated the bauxite deposits on Zomba Plateau and it was found that the quality falls short of that required for the production of aluminium, although the ore promises well for the manufacture of high temperature refractory bricks.

An experiment was made near Chiromo in the Lower Shire Valley with a view to obtaining water from wells in dry areas where new land for settlement is urgently required. The results were satisfactory, as they indicate that some scores of square miles of arable land are immediately available for settlement provided the necessary steps are taken to sink and maintain a series of wells.

The coal-boring operations at Chiromo were continued, and at the end of the year bore-hole No. 5 on the Tangasi River had reached 321 feet, through 61 feet of superficial deposits and post-Karoo pebble-beds, and 240 feet through Karroo red and grey sandy marls and sandstones, and grey shales.

### **XI.—LABOUR.**

A certain section of the planting community experienced difficulty in getting labour during the year, and it is becoming increasingly difficult to obtain labourers for the less popular kinds of work under the Public Works Department, such as road construction. There can be little doubt that the labour problem is becoming more serious. The number of natives who go abroad, chiefly to Southern Rhodesia, to seek the more highly-paid work available there, remains about constant at an estimated total of about 30,000 a year.

### **XII.—MISCELLANEOUS.**

In addition to legislation already mentioned in this report, the following important Ordinances were passed during the year :—

The Game Ordinance.

The European Officers' Pensions Ordinance.

The Seditious and Dangerous Societies Ordinance.

The King's African Rifles Reserve of Officers Ordinance.

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### History.

Prior to 1884 the administration of the Somali Coast had been in the hands of the Egyptian Government. Upon its collapse in 1884 a Protectorate was proclaimed by Great Britain over what is now recognised as British Somaliland, and the boundaries were settled by agreements with France, Italy, and Abyssinia. Until 1898 the Protectorate was administered by the Resident at Aden as a Dependency of the Government of India. In that year it was transferred to the charge of the Foreign Office, and on 1st April, 1905, to the Colonial Office.

From 1901 to 1920 the history of the Protectorate is largely a history of campaigns against Mohammed-bin-Abdulla Hassan, the "Mad Mullah." In 1901, 1902 and 1903, expeditions were sent against the Mullah, and in January, 1904, a crushing defeat was inflicted on him at Jidballeh. He then retired into Italian territory and claimed Italian protection. An agreement was made between him and the Italian Government, but the Mullah soon disregarded this agreement and commenced further aggressive actions against the tribes under British protection.

In 1908, arrangements were made for another expedition against him, but before the expedition was launched a policy of coastal concentration was adopted. In March, 1910, all troops were withdrawn from the country, except for small garrisons at the three

ports of Berbera, Bulhar, and Zeilah. This policy did not prove a success, and in 1912-13 the strict coastal concentration was abandoned and administration in the interior gradually resumed. From 1914, desultory fighting continued until 1920, when a combined attack with land and air forces completely scattered the Mullah and his followers and captured all his forts and possessions. The Mullah fled, a broken man, into Abyssinia, where he died in February, 1921.

In recent years, conditions have been peaceful with the exception of inter-tribal cattle raids both in the Protectorate and outside its borders. As indulgence in these is the hereditary pastime of all Somalis, both British-protected and otherwise, they need not be regarded very seriously, as they can be checked, and are being checked, by extension of administration.

### Geography.

The Protectorate of British Somaliland has for its northern boundary about 450 miles of coast-line on the Gulf of Aden and extends from Loyi Ada (Hadu), longitude  $43^{\circ} 15'$  East, as far as the forty-ninth degree of East longitude close to the town of Banda Ziada.

The Protectorate marches with Italian Somaliland from Banda Ziada to a point in latitude  $8^{\circ}$  North; thence with Abyssinia as far as Jalelo, and with French Somaliland from Jalelo to Loyi Ada on the coast.

The area of the Protectorate is about 68,000 square miles. It consists of a coastal plain varying from half a mile to 60 miles in depth, an escarpment precipitous at the eastern end, more gentle in the west, rising to 5,000 feet-7,000 feet, and an interior plateau sloping gently south and east to Italian Somaliland and the Abyssinian Haud. The coastal plain is hot and the rainfall as a rule is sparse. The escarpment catches the rain and on the summit are to be found areas of cedar forest. The interior plateau consists in the main of level, bush-covered country interspersed with rocky kopjes or even small detached masses of hills and with large open plains free from bush and covered with grass. The country is primarily camel country owing to the scanty water-supply, but cattle thrive, especially in the hills, and sheep and goats also do excellently so long as the rainfall is up to the average.

The chief ports are Berbera, Bulhar, Zeilah, and Las Khoreh. There is a weekly steamer service from Aden.

### Currency.

The monetary unit is the Government of India rupee and subsidiary coinage consisting of 1 pie, 1 pice, 1, 2, 4, and 8 anna pieces. Government of India currency notes are in circulation.

The rate of exchange with London during the year was approximately 1s. 6d. to the rupee, any variations from this rate being nominal.

The estimated value of the currency in circulation at the close of the year was :—

	<i>Rupees.</i>
Indian coins ... ..	9,00,000
Indian notes ... ..	3,00,000

New pattern currency notes of Rs.10 and Rs.100 were in circulation during the year.

### **Weights and Measures.**

The Imperial standard of weights and measures is in force with the addition of the " maund " (equal to 28 lb.) which is used by the Indian traders.

### **Language.**

The language is Somali, but the natives are capable linguists and Arabic and Hindustani are spoken in the coast towns.

## **I.—GENERAL.**

The political situation in the eastern area of the Protectorate caused some anxiety during 1927.

Early in the year a section of the recalcitrant Italian subject tribes, to which reference was made in the last report, crossed with their Sultan into British territory.

The Sultan surrendered to the British Government and, pending negotiations with the Italian Government, obtained permission for his people to remain in this Protectorate, on guarantee of their good behaviour, while he himself proceeded to Berbera. But his eldest surviving son, who was the fighting leader of the tribe, remained at large for some months in the eastern area and with an armed band of some 500 men formed a serious menace to the peace of the Protectorate.

Towards the end of the year the situation became easier, for the Sultan, finding that he was losing control of his people, decided to give himself up to the Italian Government. With his surrender, the majority of his people returned to Italian Somaliland, and his eldest son, losing his following, retreated into Abyssinia.

2. A most regrettable incident, in which the Abyssinian Government were concerned, occurred in June.

For some reason which has never been explained, a British Somali caravan which had been engaged by His Highness the Maharao of Cutch for a shooting trip in Abyssinia was looted in Abyssinia by Abyssinian soldiers, and several British Somalis were killed. An international tribunal investigated the case at Harar

and compensation was awarded to His Highness and to the Government of Somaliland. The Abyssinian authority responsible was removed from the post of Governor of Jig Jiga, and the compensation awarded by the tribunal was fully paid by the Abyssinian Government.

With a view to an attempt to find a solution of the border troubles on the British Somaliland-Abyssinian frontier, an administrative officer from the staff of the Protectorate has been temporarily seconded for service as Vice-Consul at Jig Jiga, a town in Abyssinia about forty miles from the frontier. This officer will be able to protect the interests of tribes claiming British protection who have prescriptive grazing rights in Abyssinia.

3. The rains in the early part of the year were poor and in the latter part failed completely. By the end of the year the whole country was in the grip of a disastrous drought the full effects of which do not properly form a subject for this year's report.

## II.—FINANCE.

4. Two important changes have occurred relative to the conduct of the finance of the Protectorate during the year. The rate of exchange has been stabilised at 1s. 6d. to the rupee to accord with the Government of India rate, and the financial year has been changed so as to coincide with the calendar year.

The financial period under review will therefore be in respect of nine months only (i.e., 1st April to 31st December, 1927), and, owing to the change in the sterling value of the rupee from 1s. 4d. to 1s. 6d., a portion of the accounts of the Protectorate are expressed in rupees, so as to facilitate comparison with the figures for the previous year.

### Revenue.

5. The revenue of the Protectorate for the nine months of 1927 amounted to Rs.11,85,056 (£88,879), an increase of Rs.3,00,835 (£22,563) as compared with the corresponding period for 1926. The principal sources of revenue were :—

Customs ...	Rs. 9,29,544 (£69,716)	an increase of Rs. 258,474 (£19,385)	over the corresponding period for 1926.
Licences,	Rs. 1,7,822 (£13,367)	„ „ „	Rs. 35,960 (£2,697) do.
Excise, etc.			
Fees of	Rs. 53,522 (£4,014)	„ „ „	Rs. 11,223 (£842) do.
Court or Office.			
Posts and Telegraphs.	Rs. 15,659 (£1,174)	a decrease of Rs. 502 (£37)	do.

This large increase in Customs would be very satisfactory if it could be regarded definitely as a true indication of better trade conditions. But it is probable that part of this increase is due

to the failure of the rains and to the fear by the natives of the drought which is to come.

The increase under Licences and Excise is chiefly accounted for by increased receipts under Zariba dues which are in the nature of additional Customs dues and consequently fluctuate in accordance with the Customs receipts.

The revenue of the Protectorate for the last five years is as follows :—

	£
1922-23 ... ..	82,316
1923-24 ... ..	78,542
1924-25 ... ..	82,608
1925-26 ... ..	89,057
1926-27 ... ..	90,569
April to December, 1926	58,941 (= Rs.8,84,221 at 1s. 4d.)
April to December, 1927	88,879 (= Rs.11,85,056 at 1s. 6d.)

### Public Debt.

6. The Protectorate debt due to the Imperial Treasury on the 31st of December, 1927, amounts to £128,750.

This sum represents the Loan-in-Aid of civil expenditure for the financial years 1921-22, 1924-25, and for the nine months of the year 1927. The Loan-in-Aid actually received in 1927 was £15,750.

During the years 1925-26 and 1926-27 the deficiency between revenue and civil expenditure was met from surplus balances.

The Loan-in-Aid is free of interest, but is subject to repayment (without interest) as and when the finances of the Protectorate permit. No repayment has yet been made.

In addition to the Loans, the Protectorate is in receipt of an annual free Grant-in-Aid of actual military expenditure. The grant received in respect of 1927 was £43,500. The total granted since the 1st of April, 1921, is £360,500.

### Expenditure.

7. The total expenditure for the nine months of 1927 is Rs.16,45,970 (£123,448), showing an increase of Rs.1,23,377 (£9,253) over the corresponding period of the previous year.

The expenditure of the Protectorate in respect of the last five years is as follows :—

	Civil. £	Military. £	Total. £
1922-23 ... ..	94,754	160,592	255,346
1923-24 ... ..	95,002	49,382	144,384
1924-25 ... ..	102,351	48,213	150,564
1925-26 ... ..	103,288	64,667	167,955
1926-27 ... ..	100,175	48,950	149,125
April to December, 1926.	—	—	101,506=Rs. 15,22,593 at 1s. 4d.
April to December, 1927.	85,497	37,951	123,448=Rs. 16,45,970 at 1s. 6d.

**Financial Position on 31st December, 1927.**

8. The abstract of revenue and expenditure is as follows :—

	£
Balance on hand, 1st April, 1927 ... ..	27,360
Revenue ... ..	88,879
Free Grant-in-Aid to cover military expenditure	43,500
Loan-in-Aid to cover civil expenditure ...	15,750
	<hr/>
	£175,489
	<hr/>

	<i>Expenditure.</i>	£
Civil ... ..	85,497	
Military ... ..	37,951	
	<hr/>	123,448
Balance on hand on 31st December, 1927 ... ..		52,041
		<hr/>
		£175,489
		<hr/>

**Banking.**

9. There are no Banks established in the Protectorate, but a branch of the commercial firm of Messrs. Cowasjee Dinshaw and Brothers, Bombay, accept deposits from private individuals. cash cheques drawn against them, and arrange for the transfer of funds to the United Kingdom and elsewhere through a branch of the firm in Aden.

There are no banking laws in force.

**III.—PRODUCTION.****Agriculture.**

10. The Agricultural Department has not yet been established long enough to enable statistics to be collected of production under this head, but the heavy decrease in the import of jowari into the country shows that production has increased.

Efforts have been specially directed this year towards improving the jowari (sorghum) crop which is already known to the Somali. Investigations of samples of the different varieties of locally-grown sorghum tend to show that all are allied to the type called Milo in the American Nomenclature. This information is of value in regard to the selection of the best kind of new seed for import and the question of the cross fertilisation of existing varieties.

Demonstrations have been given in numerous plots of the proper method of seed selection and of the most suitable quantities of seed to plant and the best methods of harvesting. Certain selected



native cultivators have agreed to reserve their gardens for trial of new seed after proper cultivation. These demonstrations were given with a light strong type of plough and harrow, and sufficient interest was aroused to justify the purchase by Government of twelve ploughs, etc., of a proved type. All have been sold to natives who are now using them almost entirely independently of Government assistance. Indeed, the demand for new implements of a similar nature fully justifies the purchase by Government of a further supply.

The sowing season begins in March, and so the results of the improved methods cannot be ascertained until the end of 1928.

An experimental plot of about four acres has been prepared for the trial of new types of crops which it is desirable to introduce with a view to obtaining a simple rotation of crops. The new types to be tried include sim-sim, gram, and groundnuts, of which the most important is gram.

A small tree nursery and an orchard of about an acre in extent has been started, and next year it is proposed to introduce from Australia valuable types of fruit trees which have never been tried in the Protectorate.

Investigations are being made in the growth of lucerne and certain varieties of drought-resisting grasses. On the coast at Berbera and Bulhar sand-fixing grasses have been sown. Although this grass is difficult to raise from seed, the results so far have been encouraging.

### **Veterinary.**

11. Veterinary service is on a modest scale, as the Department consists only of one officer with some native assistants. His work is mainly the control of outbreaks of disease among the native cattle. During the latter part of the year, there occurred a severe epidemic of rinderpest which came in from Abyssinia, where it is endemic. Efforts were made to control it by the purchase of serum from Kenya, but the efforts were wasted as the drought killed off the cattle as effectively as would have done the rinderpest.

A sheep-dip was constructed at Hargeisa during the year and the natives are being taught the advantage of dipping their sheep. Their enthusiasm at the commencement was tepid, but, as the service is free at present, it is hoped that the proved results may fan their enthusiasm to the point of acquiescence in paying for the service later.

### **Fisheries.**

12. The sea on the coast-line of the Protectorate is well stocked with fish of all kinds and several applications for fishing concessions have been received during the last few years.

There is a native pearl fishery at Zeilah. The divers run their own boats and sell the pearls to Jew merchants in Jibuti in French Somaliland and in Aden. The local conditions would make it very difficult for a European firm to compete in this industry.

### **Minerals.**

13. In September, active operations were undertaken by the syndicate holding the concession for mica in the area of the Mirso plateau south of Berbera.

Numerous prospects have been opened out along the strike of the mica dykes, and shafts up to 40 feet have been sunk. In all of the dykes, except one, the proportion of mica of good quality has been found to be too small to justify further work at the moment. In one dyke, containing leaders or veins of mica of an excellent quality known as ruby, work is being continued but, although books of considerable size have been obtained from this dyke, up to the present the proportion of mineral combining both the desired sizes and good quality has not proved to be very satisfactory.

The Anglo-Saxon Petroleum Company and the Anglo-Egyptian Petroleum Company have taken up a concession for the investigation of the oil resources of the Protectorate, with particular reference to the known oil-field at Dagah Shabel, and for this purpose the British Somaliland Petroleum Company has been formed. Work is expected to commence in September, 1928.

14. Applications have been received for concessions to establish a salt industry at Zeilah.

## **IV.—TRADE AND ECONOMICS.**

15. Trade has been excellent during the period under review, and the tendency in the country towards greater prosperity which appeared during the last few years continued during the first half of the year at any rate. The increased import of Manchester cloth and sugar, both of which may be regarded as articles of luxury, bears this out. On the other hand, the drought, which began to take effect in the latter half of the year, stimulated the import of rice and dates to take the place of the milk and meat on which the population chiefly relies for food. The purchase of these commodities has been made from reserves of cash which must be regarded as potential capital. The real capital wealth of the population consists solely of stock, and the moment the drought becomes sufficiently severe to affect the breeding stock and to accelerate the sale of surplus stock, the capital of the country is reduced. There is very little doubt that the effect of the drought, while not being yet apparent in the trade returns, will be plainly seen in the next few years.

**Sea Customs.**

16. The value of the sea-borne trade of the Protectorate during the year 1927 was Rs.106,10,783, as compared with Rs.81,48,360 in 1926. The following comparative table shows the value of the imports and exports, excluding specie, during the last five years :—

<i>Year.</i>					<i>Imports.</i>	<i>Exports.</i>	<i>Total.</i>
					<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
1923...	...	...	...	...	48,55,455	32,92,710	81,78,165
1924...	...	...	...	...	50,03,100	34,17,180	84,20,280
1925...	...	...	...	...	53,65,455	36,40,830	90,06,285
1926...	...	...	...	...	44,59,650	36,88,710	81,48,360
1927*	...	...	...	...	57,21,663*	48,89,120*	106,10,783*

\* For twelve months.

**Imports.**

17. The import trade, excluding specie to the value of Rs.1,59,322, was distributed in the following proportions amongst the four Protectorate ports :—

<i>Ports.</i>	<i>Amount in Rs.</i>	<i>Percentage.</i>				
		<i>1927.</i>	<i>1926.</i>	<i>1925.</i>	<i>1924.</i>	<i>1923.</i>
Berbera ...	35,25,294	61·6	58·8	57·5	65·7	67·6
Bulhar ...	1,88,688	3·3	5·3	6·9	4·5	7·7
Zeilah...	18,36,250	32·1	32·8	32·8	27·7	21·5
Makhir Coast...	1,71,431	3	3·1	2·8	2·1	3·2

The following were the principal articles of import showing the countries of origin :—

<i>Article.</i>	<i>Country of Origin.</i>	<i>Unit.</i>	<i>1927.</i>	<i>1926.</i>	<i>1925.</i>	<i>1924.</i>	<i>1923.</i>
American Grey	America via Aden.	Yds.	1,800	166,440	301,530	118,290	1,238,270
Sheeting.							
China Grey	China via Aden.	"	6,300	32,300	nil	nil	nil
Sheeting.							
Japan Grey	Japan via Aden.	"	3,151,960	2,466,010	2,857,110	2,587,245	934,310
Sheeting.							
European white	Manchester via Aden.	"	1,990,723	1,399,902	927,226	849,025	690,074
Long Cloth							
Dates ...	Persian Gulf	Cwt.	46,358	47,761	38,280	62,181	41,014
Rice ...	India via Aden.	"	100,515	56,259	91,971	58,251	84,790
Sugar ...	Java and Mauritius via Aden.	"	49,302	31,762	33,966	20,210	15,640

It is satisfactory to be able to record a steady increase in the import of long cloth from Manchester, but it should be explained that for everyday wear the natives prefer grey sheeting, and this appears to be a commodity in which British firms are unable to compete.

It is interesting to note how completely the Japanese grey sheeting has replaced the American article.

Mention might be made of the possibility of a substantial increase in the import of hardware, which has begun to take the place of locally-made utensils.

Natives now use enamel bowls as milk containers and a large type of tin basin is becoming popular as a watering trough in preference to the skin contrivance which has been in general use.

Such hardware as is now imported is manufactured in Czechoslovakia, for the native considers first the price and not the quality of the article.

Reference has been made in previous reports to the use of British cars in this country. The number of imported British cars has increased from two to seven this year, but the market is so far confined to Government officials. When the Government has begun to use British-made commercial vehicles instead of the one-ton Ford truck, the local traders will perhaps wish to follow the example, and, if suitable British cars *and spares* can then be obtained from Aden, the Protectorate should possess a small market which would be capable of considerable development. It is of interest to note in this connection that the Alexandria branch of the American firm of General Motors, Ltd., are taking an interest in Somaliland and have already made endeavours to establish the Chevrolet here in place of the Ford.

### Exports.

18. The export trade, excluding specie to the value of Rs.28,487, amounted to Rs.48,89,120 and was distributed in the following proportions amongst the Protectorate ports :—

Port.	Amount in Rs.	Percentage.				
		1927.	1926.	1925.	1924.	1923.
Berbera ...	26,88,154	54.9	56.0	58.8	57.3	54.5
Bulhar... ..	3,36,880	6.9	9.4	8.2	8.7	10.3
Zeilah ... ..	15,57,980	31.9	28.3	29.0	30.5	31.0
Makhir Coast...	3,06,106	6.3	6.3	4.0	3.5	4.2

The following were the principal indigenous products, showing the country of destination to which they were exported :—

Article.	Country of destination.	Unit.	1927.	1926.	1925.	1924.	1923.
Bullocks	Aden	Numbers	1,340	1,008	789	881	1,167
Sheep and Goats.	Mostly to Aden. An increasing number to Egypt. A few goats to Colombo and Singapore.	Numbers	120,123	126,280	97,492	93,872	79,509
Sheep and Goats' skins.	America and Europe via Aden.	Numbers	1,754,548	1,066,702	1,302,302	1,008,859	755,930
Hides.	do.	Cwt.	130	181	653	17	126
Gums and Resins.	Europe, India via Aden.	Cwt.	5,047	6,766	5,227	5,563	4,127
Ghee.	Aden.	Cwt.	4,938	3,693	2,761	8,986	8,796

The large increase in the export of sheep and goats' skins may be partly due to the failure of the rains at the end of this year, as has been previously explained, and partly to the increased interest taken by the natives in the sheep as a trading medium. It has been observed in one of the largest districts that the natives there no longer regard the camel as the most important investment but are concentrating on sheep.

The export of gum is capable of development.

The majority of the gum is exported from the Erigavo District, which is in the eastern part of the Protectorate. It is collected by the natives in the most primitive way, and the facilities for shipping from the coast are not good.

The Agricultural Department is now fully occupied with the agricultural areas in the west of the Protectorate, but at some later date the Department may be able to turn its attention to teaching the natives better methods of collection and grading of the gums. It is of interest to note that at the request of one of the largest British manufacturers of confectionery a sample of the gum from Erigavo was sent to England this year.

#### Land Customs.

19. The following are the statistics for the land Customs station at Zeilah during the last five years :—

<i>Imports.</i>							
Item.	Unit.	1927.	1926.	1925.	1924.*	1923.*	
Millet (Sorghum)	Cwt.	661	955	1,417	4,196	15,644	
<i>Exports.</i>							
Cattle	Number	934	827	945	No record kept		
Sheep and Goats	Number	7,421	4,905	5,901	No record kept		
Salt ...	Cwt.	15,903	19,089	20,988	26,061	34,314	

\* Included station at Buramo which was closed in 1925.

The large decrease in the import of millet is due to the increase of cultivation in the western area of the Protectorate.

### Transit Trade.

20. Customs duty at the rate of 1 per cent. *ad valorem* is levied on all merchandise in transit between the Protectorate and Abyssinia. As will be seen from the comparative figures given below, this concession has succeeded in creating a substantial transit trade across the frontier, despite the fact that merchants using the Port of Zeilah have to employ camel transport in competition with the Franco-Ethiopian railway at Jibuti :—

	1927.	1926.	1925.	1924.	1923.
Value of Transit Trade Rs.	14,63,849	9,00,783	7,40,455	5,02,367	2,49,693

## V.—COMMUNICATIONS.

### Shipping.

21. The following is a comparative table of the steam and country craft shipping which entered and cleared from the Protectorate Ports during the past five years : —

	1927.		1926.		1925.		1924.		1923.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Entered	666	51,682	504	39,920	560	38,420	528	33,112	696	33,502
Cleared	651	50,861	511	40,870	579	37,966	523	32,588	693	32,640

### Roads.

22. The road from Berbera to Hargeisa, to which reference was made in the last report, has now been completed. It is a well-graded road 110 miles in length and forms the easiest avenue of approach to the high plateau of the interior. It is suitable for cars and light lorries, and the surface is sufficiently good to allow the journey to be accomplished in under four hours, though this pace is not recommended.

There are 850 miles of cleared tracks, suitable for motor transport, in the country.

### Posts and Telegraphs.

23. The revenue and expenditure of the Post and Telegraph Department in respect of the last five years is as follows :—

	1927.	1926-27.	1925-26.	1924-25.	1923-24.
	(nine months)				
	£	£	£	£	£
Revenue ...	1,174	1,452	1,136	1,196	1,308
Expenditure ...	5,654	7,447	6,695	6,680	4,865

The weekly mail service from Aden has been carried on throughout the year by Messrs. Cowasjee Dinshaw and Brothers' steamers. Application for a mail contract has been made by another firm

whose vessels have been calling regularly during the latter part of the year.

Mails are distributed by motor-car once a week to all the stations in the Protectorate except to Erigavo, Bulhar, and Zeilah, to which stations a weekly service by runners is maintained.

### **Telegraphs.**

24. Wireless stations ( $1\frac{1}{2}$  Kilowatt) are in operation at Berbera, Burao, Hargeisa, Zeilah, and Erigavo, and a new station is about to be erected at Buramo.

The British official wireless news service is received and circulated throughout the Protectorate.

The wireless telegraph station at Berbera has been rebuilt during the year under review and an installation of an up-to-date type installed.

There is an air-line from Berbera to Burao via Sheikh (86 miles), which is used for telegraph and telephone communications.

The telegraph charges are :—

6 annas per word from any Protectorate station to Aden.

2 annas per word to any station within the Protectorate.

Rs.1-14-0\* per word to the United Kingdom.

Rs.1- 6-0\* per word to India.

\*Half this rate is charged for deferred telegrams.

## **VI.—JUSTICE, POLICE, AND PRISONS.**

### **Justice.**

25. The Law of the Protectorate is :—

(a) Coded Law, i.e., the Indian Penal Code as applied by the " Somaliland Administration of Criminal Justice Ordinance, 1926," and local Ordinances.

(b) Tribal Custom based on Mohammedan Law.

A much stricter legal control is now exercised. In past years, murder and homicide among the natives have been dealt with under tribal custom, but such crimes are now tried by the Criminal Courts. The death penalty has been exacted in one particularly brutal case, and there is evidence that the natives are beginning to regard the taking of life more seriously.

### **Police.**

26. The establishment of the Police Force on the 31st of December, 1927, was as follows : —

1 Commandant ;

1 Assistant Commandant (who is also Director of Prisons) ;

1 Pay and Quartermaster ;  
525 Rank and File ;

who were distributed as follows :—

Berbera District	...	3 officers and 195 rank and file.
Burao District	... ..	50 rank and file.
Hargeisa District	... ..	75 rank and file.
Erigavo District	... ..	100 rank and file.
Zeilah District	... ..	105 rank and file.

The administration of the Force is carried on from Berbera, and the rank and file in the other stations are directly under the orders of the Commissioners in charge of the Districts.

### **Prisons.**

27. There are two classes of prisons in the Protectorate : the Central Prison in Berbera, where prisoners under sentence of terms of more than six months are confined ; and local prisons at Zeilah, Burao, Hargeisa, Erigavo and Buramo.

The Central Prison is administered by the Assistant Commandant of Police, who is styled the Director of Prisons ; the local prisons are under the direct control of the Commissioners in charge of the Districts. The Assistant Commandant has a staff of one Superintendent and 48 warders and one female warder, at Berbera.

Convicts under long sentence are afforded a certain amount of liberty within the walls of the prison and are taught useful industries, such as tailoring, spinning, weaving, gardening, rope-making, and caning and repairing chairs, and basket or leather work. Convicts under short sentences are employed on public works, such as quarrying, road-making, etc.

Well-behaved prisoners under sentence of one year are able to earn remission of one-sixth of their sentence, and those who are sentenced to more than one year can earn a remission of one-quarter of their sentence.

## **VII.—PUBLIC HEALTH.**

28. The Protectorate has been added to the list of British Colonial Administrations which adhere to the International Sanitary Convention of 1926.

An isolation hospital for lepers was completed in Berbera at the beginning of the year.

The construction of a lunatic asylum in Berbera is under consideration.



29. The Medical Department undertake the collection of meteorological statistics, which are as follows :—

Station.	Total Rain-fall.	Absolute Maxi-mum Temper-ature.	Absolute Mini-mum Temper-ature.	Mean Maxi-mum.	Mean Mini-mum.	Total Rainfall.			
						1926.	1925.	1924.	1923.
	Inches	Fahr.	Fahr.	Fahr.	Fahr.	Inches	Inches	Inches	Inches
Berbera ...	2.02	110	61	92.5	77.0	6.54	0.56	0.98	2.86
Burao ...	9.78	92	48	84.3	63.7	12.30	11.89	8.96	9.90
Sheikh ...	11.70	96	34	83.5	55.3	27.38	20.59	23.51	47.14
Hargeisa ...	14.58	94	33	84.3	55.9	31.91	16.39	18.06	16.86
Zeilah ...	8.42	118	60	94.8	75.2	10.81	2.04	0.56	not re-corded
Buramo ...	19.79	93	34	84.2	54.9	27.79	23.24	9.58*	do.
Erigavo ...	15.29	92	26	80.9	42.0	18.34	12.62	not re-corded	do.

\* Six months only.

These statistics do not seem to bear out the references to an abnormal drought which appear in other parts of this Report, but it must be remembered that in this sandy country it is less the gross amount of rainfall which counts than its distribution over a reasonable number of days.

### VIII.—LANDS AND SURVEY.

30. All land in the Protectorate except in proclaimed townships may be said to be vested in the Somali tribe. Outside the townships no individual title to land is recognised (except in the case of a few small religious settlements) nor is any sectional title to any particular area recognised as giving any particular section of the tribe an exclusive right to that area. It is the habit of certain sections always to graze in the same area and this in practice gives them a prescriptive title to that area, but theoretically and legally individuals of other sections have the right to enter such areas and use the grazing as necessity dictates. In the western part of the Protectorate, where large areas of ground are under cultivation, the tribal title has been restricted to the extent that the right of individual cultivators to the enjoyment of the area cultivated is recognised, but only so long as effective cultivation is continued.

During the past year, Government has taken powers to expropriate land for public purposes, on payment of compensation for damage done thereby to an individual or section. Land so expropriated becomes Crown land.

The township areas are divided into two classes :—

- (a) Old-established towns on the coast, such as Berbera and Zeilah; and
- (b) Recently-established towns in the interior.

In class (a) freehold right to the land could presumably be established by the present owners. Actually, there are no valid deeds of ownership, and the provision of such deeds would entail such heavy work of investigation that the matter has been allowed to remain undefined. In practice, disputes as to ownership seldom arise.

In class (b), Government has during the last year introduced legislation to give to individuals a valid title to ground. All townships are of such recent growth that, except in five small plots in Hargeisa, no claim to freehold has been established, and leases or temporary occupation licences have been given to such of the present occupiers as wish to secure a legal title to their land.

### IX.—LABOUR.

31. The Somali has proved himself to be an intelligent and willing worker if properly led. Government has usually been able to obtain labour at a reasonable cost, but hitherto there has been little or no chance of testing the Somali under private employ.

It has been considered necessary to regularise the terms of contract between private employers and local labour, and this year a Masters and Servants Ordinance, modelled on the lines of the legislation in force in Nigeria, together with an Employer's Liability Ordinance, have been enacted.

The export from the Protectorate of unskilled labour is governed by law and is subject to stringent conditions.

W. L. HEAPE.

*Assistant Secretary to the Government.*

THE SECRETARIAT,

BRITISH SOMALILAND,

30th April, 1928.

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**Report for 1927**

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# GRENADA.

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## ANNUAL GENERAL REPORT FOR THE YEAR 1927.

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### Introduction.

#### GEOGRAPHICAL.

Situated in the extreme south of the Caribbean Sea, Grenada is the nearest British island to the mainland of South America with the exception of Trinidad and Tobago. It lies 90 miles north of Trinidad and between the parallels of  $12^{\circ} 30'$  and  $11^{\circ} 58'$  North latitude and  $61^{\circ} 20'$  and  $61^{\circ} 35'$  West longitude. The Island is about 21 miles in length and about 12 miles in its greatest breadth. Its area is about 120 square miles, but, including Carriacou, an island to the north, the area of the Colony of Grenada is 133 square miles.

Grenada is mountainous and well watered by streams. Its coastline is rugged, especially on the western coast, and towards the south is deeply indented with bays. St. George's Harbour, land-locked and deep watered, is one of the most beautiful in the West Indies.

The mountain spurs, clothed with forests to their summits, intersect the Island into numerous picturesque valleys. There are two small lakes, formed in extinct craters, one called the Grand Etang, being situated near the centre of the Island 1,740 feet above sea-level, while the other, Lake Antoine, is near the sea on the eastern coast. A sanatorium is established near the former.

#### HISTORICAL.

Grenada was discovered by Columbus on 15th August, 1498, but for more than 100 years after its discovery the Island was left in the undisturbed possession of the aboriginal inhabitants who were of the Carib race. Early in the seventeenth century both English and French adventurers made efforts at occupation of the Island, and after being owned by French proprietors for some years it was annexed to France in 1674. In 1763 the Island was ceded to Great Britain by the Treaty of Paris, but was recaptured by the French in 1779 and held by them for the next four years. In 1783, by the Treaty of Versailles, Grenada and the Grenadines were finally restored to Great Britain.

In 1795-96, influenced by the French Republic, a rebellion broke out, and the Lieutenant-Governor and 48 other British subjects were massacred by the rebels. The rising was suppressed in June, 1796, by Sir Ralph Abercrombie, and the ringleaders executed.

The later history of the Colony has been peaceful and uneventful, and Grenada has reached a high state of development.

#### CLIMATE.

The climate from December to end of April may be described as good, as during that period the heat is tempered by the prevailing trade winds. In the autumn from July to end of October, there is great humidity and extreme heat, with little variation between night and day. During this period the climate is extremely debilitating, although not exactly unhealthy. The highest temperature in 1927 was 92 degrees on 24th September and 6th October, and the lowest 65 degrees on 19th March. The mean of maximum temperatures was 85 degrees and the mean of minimum 74 degrees. The rainfall varies according to altitude. In the lowlands of the south the annual amount is as low as 30 inches. In the mountainous centre it approaches 140 inches. At St. George's, midway between the two, the rainfall in 1927 was 76.79 inches. Over the past 30 years the average at St. George's has been 72.79 inches.

#### LANGUAGE.

The only language spoken is English. A small and decreasing number of agricultural labourers in the country districts speak a very corrupt patois of English and French, but all understand and speak English.

### CURRENCY.

The currency is the same as in Great Britain, the monetary units being the same. Silver, however, is legal tender without limit, and there are also in circulation bank notes of Barclays Bank and the Royal Bank of Canada, of five dollars denomination. One or two of the business houses keep their accounts in dollars and cents, but the Government accounts are in sterling.

### WEIGHTS AND MEASURES.

Weights and measures are of the Imperial standard. An exception to this has arisen recently in connection with motor spirit, which is sold by the wine or American gallon.

#### 1.—General.

The continuance of high prices for the Colony's staple products of cocoa, nutmegs, and mace has added another prosperous year to Grenada's record, a result to which fine weather conditions and satisfactory crops also contributed. The cocoa shipments in the crop year ended 30th September, 1927, amounted to 54,296 bags (of 180 lb.) as compared with 47,857 bags in the same period of the preceding year. The spice crops were also good and it may be of interest to note that Grenada produces one-third of the world's supply of nutmegs and mace. The quantities exported last year were 21,238 cwt. of nutmegs and 3,733 cwt. of its derivative, mace.

The wealth arising from these prosperous conditions is widely distributed, for Grenada is an Island of peasant proprietors who number 15,211 out of a total population of 73,319. As all parts of the Island have benefited by the increased circulation of money, the signs of prosperity are everywhere apparent in the number of motor-cars and motor 'buses that ply on the roads, in the attendance at numerous race meetings, and the general appearance and dress of the inhabitants.

The prosperity is reflected also in the financial position of the Government, and in place of the deficit which existed a few years ago the Colony had at the end of 1927 surplus assets amounting to £90,869. Of this amount £37,188 is invested towards forming a reserve fund of £50,000 as a special reserve to be used only in the time of serious emergency.

Coincident with the prudent building up of assets, the Government has proceeded with the execution of several important public works, which are detailed under Section VII of this report.

In his address introducing the Estimates in Legislative Council, His Excellency announced, among other schemes of Government policy, the intended formation of a Central Water Authority in connection with the scheme for improvement and extension of water supplies (referred to in last year's report) which had now been practically completed.

The Central Water Authority would take over the existing water works and be responsible to the Boards for the supply of water up to its delivery from the tap, the Boards on their part continuing as formerly to assess the water rates, fixing the rates at such figures as they consider necessary to meet the contribution to the Central Water Authority, and any surplus arising from the water rates would go to the Boards' general revenue. A competent Water Engineer would serve as the executive officer of the Authority, on which each of the District Boards would be directly represented. The St. Andrew's District Board are also desirous of constructing a covered market in the town of Grenville, and of developing and improving the town, and it has been decided to meet the cost of this scheme, together with that of the water extension, by the raising of a loan of £10,000 through the Crown Agents for the Colonies.

New market buildings in St. George's and Gouyave are also under consideration.

The oiling of the main roads and of the principal streets in the town of St. George's has greatly improved matters in regard to health and sanitation. The town is practically free from dust, and for a tropical town of its size has a clean appearance which elicits praise from visitors.

The scheme for electric light in St. George's area and reconstruction of the telephone system throughout the Colony is being proceeded with. The necessary loan of £40,000 was raised through the Crown Agents for the Colonies under the inter-colonial scheme of loans. The proposal to utilise the Annandale River as a source of power has, however, been abandoned in consequence of difficulties which arose in connection with acquisition of the necessary land, and on the advice of the Consulting Engineers it has been decided to proceed with the alternative plan of an internal combustion engine scheme, to be supplemented hereafter if necessary by hydro-electric power. This scheme involves less capital outlay, but necessitates at first a higher charge for supply of light, but it is not expected that the charge per unit will exceed the rate now being paid in other West Indian islands.

His Excellency also announced that it was his intention to appoint a Committee to advise as to the manner in which Government grants-in-aid to the Denominations on behalf of education should be adjusted in the future.

The Government had taken over the Queen's Park during the past year, and it was hoped that a start would soon be made with the new Pavilion, towards the cost of which the Government were to make a contribution of £1,000.

## **II.—Finance.**

### **REVENUE.**

The revenue for the year amounted to £155,508, being the highest on record.

Import duties continue to be the chief source of revenue, and the following table shows the proportion of revenue from that and other sources :—

<i>Year.</i>				<i>Import Duties.</i>	<i>Export duties, Income Tax and other direct taxation.</i>	<i>Other Sources.</i>
				£	£	£
1923	...	...	...	37,709	45,119	20,995
1924	...	...	...	50,116	47,206	20,131
1925	...	...	...	67,342	59,454	19,422
1926	...	...	...	62,471	64,704	21,271
1927	...	...	...	68,523	66,473	20,512

#### EXPENDITURE.

The expenditure was £131,413, being less than the revenue by £24,095.

The following table gives a comparison of revenue and expenditure for the past five years :—

<i>Year.</i>				<i>Revenue.</i>	<i>Expenditure.</i>	<i>Surplus.</i>
				£	£	£
1923	...	...	...	103,823	113,095	—
1924	...	...	...	117,453	106,003	11,450
1925	...	...	...	146,218	112,467	33,751
1926	...	...	...	148,447	119,001	29,446
1927	...	...	...	155,508	131,413	24,095

No changes took place during the year in the method of raising revenue, and the only alterations in rates of taxation were slight increases in the general rates of import duty on cement, cocoa, cordage, fish, and dried fruits and nuts, in order to give an increased Empire preference on these articles, in accordance with certain recommendations under the Canada-West Indies Trade Agreement.

#### ASSETS AND LIABILITIES.

The excess of assets over liabilities at 31st December, 1927, was £90,869, of which £37,188 is invested as a reserve fund. The other ordinary surplus assets of £53,681 comprise the following items :—

	£
Loans to District Boards ... ..	15,771
Public Works Stores and Colony Drug Stores ...	5,941
Land Settlement Advances ... ..	536
	<hr/>
	£22,248
	<hr/>

leaving approximately £31,433 as liquid or readily available assets.

**PUBLIC LOANS.**

The particulars of public loans outstanding at 31st December, 1927, and of the accumulated sinking funds may be seen from the following tables :—

<i>Description of Loan.</i>	<i>Legal Authority.</i>	<i>Amount.</i>	<i>Annual Sinking Fund Contribution.</i>	<i>Accumulated Sinking Funds.</i>			<i>Present yield on Securities.</i>
				<i>Cost Price.</i>	<i>Nominal Value.</i>	<i>Present Market Value.</i>	
4 per cent. Inscribed Stock.	Ordinance No. 15 of 1891.	£ 123,670	£ 1,237	£ 83,955	£ 91,394	£ 79,830	£ 3,680
Local Loan, 1917.	Ordinance No. 12 of 1917.	100,000	1,500*	15,879	16,036	16,368	816
Electric Lighting and Telephone Reconstruction Loan.	Ordinance No. 13 of 1927.	£40,719	9 4	Contribution to Sinking Fund to commence in October, 1930. Nil.			—

The first drawings in connection with redemption of the Local Loan, 1917, took place on 28th January, 1928, when debentures amounting to £18,040 were drawn. These will be paid off on 15th June, 1928.

In addition to the increased sinking fund contribution of £1,790 in respect of this Loan, the interest on the redeemed debentures will continue to be added to the sinking fund, this being necessary to effect total redemption by the date fixed by the Ordinance, namely, 1947. Annual drawings in connection with this Loan will continue to take place up to the combined amount of the sinking fund contribution and interest on the redeemed debentures.

\*Increased to £1,790 from 1st January, 1928.

The particulars of the terms or periods for redemption of the above mentioned loans are as follows :—

4 per cent. Inscribed Stock—To be paid off on the 15th May, 1917–42, by half-yearly investments of a sum equal to one per cent. per annum of the total amount issued.

Local Loan, 1917—Redeemable on 15th December, 1947.

Electric Lighting and Telephone Reconstruction Loan—Redeemable 15th April, 1959.

**III.—Production.****AGRICULTURE.**

*Cocoa.*—This continues to be the principal crop of the Colony.

The following table shows the quantity exported annually, and the value, during the last 10 years :—

Year.	Quantity. cwt.	Value. £
1918 ... ..	135,572	519,365
1919 ... ..	99,368	539,740
1920 ... ..	81,732	466,658
1921 ... ..	87,421	185,193
1922 ... ..	72,904	167,056
1923 ... ..	77,783	155,883
1924 ... ..	85,394	201,547
1925 ... ..	73,216	197,231
1926 ... ..	83,384	223,290
1927 ... ..	100,478	305,640

The main causes of the decrease in production after 1921 have been given by experts as follows :—

(a) Destruction of plantations by the hurricane in September, 1921.

(b) Unfavourable market prices in the period from 1923 to 1925.

(c) The interplanting of nutmeg trees on cocoa cultivations.

The necessity for accurate costing in connection with cocoa cultivation has been realised, and has undoubtedly led to the discovery that certain lands were unsuitable for cocoa and were not yielding a profit under that crop except in years of abnormally high prices. As periods of exceptional prices occur only rarely, the reduction in crop volume by the cutting out of these areas has not on the average resulted in reduced net profit to the estates.

*Nutmegs.*—The area under cultivation has been steadily extended for many years, and the greatly increased market prices of recent years have brought this product into close rivalry with that of cocoa. The particulars of export for the past ten years may be seen from the following table :—

Year.	Quantity. cwt.	Value. £
1918 ... ..	23,053	103,417
1919 ... ..	15,354	54,281
1920 ... ..	14,604	59,448
1921 ... ..	18,023	34,007
1922 ... ..	22,542	59,959
1923 ... ..	21,611	55,017
1924 ... ..	19,369	95,321
1925 ... ..	21,762	145,861
1926 ... ..	22,702	127,000
1927 ... ..	21,238	103,444

*Mace*.—The quantity of mace exported in 1927 was 3,733 cwt., of the value of £59,145.

*Cotton*.—Cotton is cultivated in Carriacou where a slight extension of the cultivation on the larger estates has recently taken place. The Regulations governing the control of the pink boll worm have been rigidly enforced, and it is reported that no pink boll worm was in evidence at any time during the reaping or ginning season.

The particulars of exports of cotton during the past five years are as follows :—

<i>Year.</i>				<i>Quantity cwt.</i>	<i>Value. £</i>
1923	...	...	...	2,950	12,904
1924	...	...	...	2,842	15,180
1925	...	...	...	3,252	16,500
1926	...	...	...	3,159	14,040
1927	...	...	...	3,788	15,890

*Sugar*.—Attempts have been made from time to time to stimulate the production of sugar, and for the past three years the protective duty has been increased to 1d. per lb., yet, notwithstanding this very material help, it has not been found practicable to grow sufficient sugar for the local demand. Importations of raw sugar last year amounted to 1,719,583 lb., of the value of £14,280.

Various other crops are grown, but only to a small extent. The area of fertile land in places accessible for profitable cultivation is limited, and although the cultivation of other crops, such as grape fruit, for instance, could be extended, their development beyond a certain limit could only be at the expense of existing profitable cultivations.

*Rum* is manufactured on twelve estates, the quantity delivered for home consumption last year being 47,077 proof gallons. This was insufficient for the demand, and 2,418 proof gallons were imported in the same period, principally from Barbados.

*Ice* is manufactured at a factory in St. George's subsidised by Government.

#### FORESTRY.

A forest reserve of 2,485 acres is established at Grand Etang near the centre of the Island, and by legislation the mountain ridges are protected from denudation. The areas are too small and too inaccessible for growth with a view to profit, their main value and importance consisting in preserving the sources of water supply.

#### FISHERIES.

There are various fishing grounds adjacent to the coasts, and supplies of fresh fish are fairly constant. The fishermen do not venture far from the coast, and there are no surplus quantities available for smoking or curing.



The Whaling Industry which was established in 1925 on Glover Island ceased operations after 1926, and no whales were caught and no whale oil was exported in 1927.

### MINING.

There are no mines of any kind.

## IV.—Trade and Economics.

The total trade, import and export, amounted in value to £922,140, the value of imports being £415,607 and that of exports £506,533. The apparent trade balance in favour of the Colony was £90,926.

### IMPORTS.

The following table shows the principal articles imported, according to value, and a comparison is given with the values imported in the previous year :—

Article.	Value, 1927. £	Value, 1926. £	Increase or decrease over 1926.	
			Increase. £	Decrease. £
Flour ... ..	46,273	47,582	—	1,309
Cotton piece-goods ... ..	32,071	39,794	—	7,723
Fish—Dried ... ..	14,915	13,904	1,011	—
Sugar—unrefined ... ..	14,280	9,251	5,029	—
Rice ... ..	12,314	10,386	1,928	—
Boots and shoes ... ..	10,112	7,850	2,262	—
Motor-cars ... ..	10,086	14 439	2,994	—
Motor parts ... ..	7,347			
Motor Spirits ... ..	9,203	8,205	998	—
Wood, etc.—unmanufactured ... ..	8,881	22,739	—	13,858
Manures ... ..	8,559	4,004	4,555	—
Kerosene Oil ... ..	7,873	7,007	866	—
Biscuits, Bread, &c. ... ..	6,547	5,774	773	—

*Notes re changes of trade.*—There has been no radical change in the nature of trade or of sources of supply. The increased importations of various articles are due to the present prosperity of the Island. The importation of lumber in 1927 was normal, there being an unusual quantity imported in 1926 as the result of destruction of a lumber yard by fire.

The sources of supply of imports are shown below :—

	£
United Kingdom... ..	146,159
United States of America ... ..	72,553
Canada ... ..	96,062
Other British Possessions ... ..	71,473
Foreign Countries ... ..	29,360

EXPORTS.

The exports, amounting in value to £506,533 (of which £495,701 represented the value of local products and £10,832 of re-exports) consisted of the following :—

	£
Cocoa, raw ... ..	305,640
Cotton, raw ... ..	15,890
Cotton seed ... ..	2,960
Spices, nutmegs ... ..	103,444
Mace ... ..	59,145

The direction of the export trade may be seen from the following table :—

	£
United Kingdom... ..	196,346
United States of America ... ..	241,985
Canada ... ..	42,044
Other British Possessions ... ..	17,578
Other Foreign Countries ... ..	8,580

It is observable that a greater quantity of the Colony's staple products (with the exception of cotton) continues to go to the United States of America than to the United Kingdom, the figures being as follows :—

<i>United States of America.</i>			<i>United Kingdom.</i>		
	<i>cwt.</i>	£	<i>cwt.</i>	£	
Cocoa, raw ... ..	48,522	147,970	38,834	117,785	
Nutmegs... ..	14,519	70,070	4,956	24,390	
Mace ... ..	1,379	21,780	2,144	34,260	

The duty in respect of exports amounted to £14,076, as compared with £11,061 in 1926. The products in respect of which these amounts were collected were :—

	1927.	1926.
	£	£
Cocoa ... ..	9,901	5,668
Cotton, raw ... ..	204	316
Cotton seed ... ..	228	192
Nutmegs ... ..	2,087	3,626
Mace ... ..	1,656	901
Whale Oil ... ..	nil	337
Whale manure ... ..	—	21

The duties are on graded scales according to market prices in London and New York, and the increase under the head of cocoa was due to a larger crop and better prices than in the previous year.

Other articles of export, of comparatively small value, included bananas and other fruit, lime juice, salt, coconuts and copra, hides and skins.

**V.—Communications.****(i) BY SEA.**

The Canadian Government Mercantile Marine maintains a monthly passenger service between Halifax and St. John and the West Indies, with an alternate fortnightly cargo service. Steamers of the Furness Withy Line from New York call at intervals of about ten to fourteen days.

Direct communication with London is maintained monthly by the passenger steamers of the Harrison Line, and cargo steamers of this Company pay intermediate calls.

There is frequent communication with Trinidad and Barbados by sailing vessels as well as by steamers of the companies above mentioned.

A coasting service by daily motor-boat, with a call once a week to Carriacou, is subsidised by Government.

**(ii) BY CABLE AND WIRELESS.**

The Colony is linked up with other parts of the world by the cable line of the West India and Panama Telegraph Company.

A wireless station worked by the Pacific Cable Board, under subsidy, is established in St. George's and communicates with Barbados.

A subsidiary wireless station, erected by the Government, communicating with Grenada has also been installed at Carriacou.

**(iii) BY LAND.**

There is no inland telegraph service.

A telephone service worked by Government has been in existence for many years. The total number of instruments in use last year was 771, there being an increase of 71 subscribers during the year. There are six exchanges and subscribers have the right of communication throughout without trunk-line charges. The revenue amounted to £4,289 7s. 1d. and expenditure to £3,105 8s. 6d.

The present system—an earth return circuit—has reached its limit of usefulness, and reconstruction to a more modern system is now being undertaken.

There is a good system of roads and bridges throughout the Colony, there being 148 miles of main roads and 301 miles of by-ways. All are suitable for motor traffic, and several miles of the main roads are oiled. Six motor road rollers are in constant use in road maintenance and repairs.

**VI.—Justice, Police and Prisons.****(i) JUSTICE.**

There were 1,859 convictions during the year 1927, 1,841 in the summary courts and 18 in the Supreme Court, as compared with an average during the three preceding years of 1,850 summary convictions and 22 convictions on indictment.

Since the year 1924, when there was the considerable number of 305 convictions for praedial larceny, there has been a steady decrease in the number of convictions for this offence. In 1925 the number of such convictions was 259, in 1926 the number was 190, and in the present year 146. The continuous decrease is probably due to the increased general prosperity of the Colony since 1924.

As is usually the case in this Colony the occurrence of the more serious forms of crime was rare. There was no conviction for homicide or for an offence against property with violence to the person. A single case of rape occurred.

**(ii) POLICE.**

The fixed establishment consists of 1 Officer-in-Command, 1 Inspector, and 88 non-commissioned officers and men.

Rural Constables to the number of 225 were also on the roll on 31st December, 1927. These Constables are only employed on special occasions.

All ranks were trained in musketry and fired a modified course with satisfactory results.

A fire brigade is under the Police and was considerably improved last year by the acquisition of a motor fire truck and duplicate equipment of hose and standpipes.

A number of chemical fire extinguishers was obtained and installed in the various Government institutions and buildings.

The Government Band is also under the Police and consists of a Bandmaster and twelve bandsmen. The conversion of the band into a Police Band is being undertaken, and at present five of the Bandsmen are in the Police Force, and several Constables are being taught with a view to becoming bandsmen.

**(iii) PRISONS.**

The number of prisoners in custody at the beginning of the year was 34, of whom 27 were males and 7 females.

There were 166 admissions during the year, 126 being males and 40 females.

The daily average number of prisoners was 28 in the case of males and 6.6 in the case of females.

The following table shows the number of recommitals on conviction for the year :—

		<i>Once.</i>	<i>Twice.</i>	<i>Three or more.</i>
Males	... ..	14	7	40
Females	... ..	3	4	12
		—	—	—
		17	11	52
		—	—	—

Religious services were carried on regularly throughout the year by the Anglican and Roman Catholic ministers.

The behaviour of the prisoners was good, and there were only two cases of corporal punishment.

The health of the prisoners was satisfactory. The daily average on the sick list was 0.7 males and 0.6 females. One male and one female were transferred to the Colony Hospital, and one female was treated in the Prison Infirmary. There were no deaths.

In regard to labour, prisoners were employed at stone breaking, baking, preparing cocoa, and tailoring within the prison walls, and gangs were employed outside at clearing and cultivating lands and repairing roads.

The prison is now combined with the Police Department and the arrangement under the present head is working satisfactorily.

## VII.—Public Works.

The public works of principal importance undertaken during the year consisted of the following :—

(a) Commencement of bridge over St. John's River at Queen's Park.

(b) Construction of a residence for the Commissioner, Carriacou.

(c) Improvement of water supplies in Carriacou.

(d) Construction of a Leper Settlement.

(e) Improvement of the Colony Hospital, including interior painting of the main building, extension of the operating theatre, and Nurses' Hostel.

(f) Construction of a public bathing house at Grand Anse.

(g) Construction of a boat shelter in St. George's Harbour.

(h) Continuation of improvement and extension of water works and supplies throughout the Colony.

(i) Continuation of draining and filling up of low-lying areas in Queen's Park.

(j) Preliminary work in connection with the reconstruction of the telephone system and electric light scheme.

### **VIII.—Public Health.**

The year 1927 was a healthy one, there being no serious outbreak of infectious disease, while there was a marked decrease in infantile deaths.

There was a period of unusually high temperature in the autumn, the unusual height of 92° F. in the shade being recorded on two days. The lowest temperature was 65°, recorded on 19th March.

The deaths numbered 1,147, and the death-rate per 1,000 was 15.6, the lowest rate so far recorded. In 1926 it was 20.3, and in the previous year 16.5

The infantile death-rate per 100 births of infants dying under one year was 10.46.

The births numbered 2,294; of these 1,135 were boys and 1,159 girls. The birth-rate per 1,000 was 31.29.

Three hundred and fifty marriages were registered, being at the rate of 41.7 per thousand of the population.

Diarrhoea and enteritis caused 272 deaths (as against 400 in 1926) and the next principal cause of death was malaria which accounted for 87 deaths (as against 84 in 1926).

The estimated population at the 31st December, 1927, was 73,319.

A Leper Settlement was constructed last year, the site selected being a promontory on the south-west coast of St. George's parish, and the cost, inclusive of construction of roads and a water supply, was £1,500. Lepers are few in number (less than twenty) but segregation has proved difficult to enforce, and it is expected that by the provision of the Settlement leprosy will be eradicated from Grenada within a generation.

### **IX.—Educational Progress.**

Dr. H. A. Baker, D.Sc., the Director of Education, who had been seconded last year was confirmed in the appointment of Geologist to the Newfoundland Government. During the entire year the duties of Director were performed by Mr. H. H. Pilgrim in conjunction with his own duties as Inspector of Schools.

#### **SECONDARY.**

Sixteen pupils from the Grenada Boys' School entered for the Cambridge Junior Local Examination, and 12 passed, 1 Honour and 1 Distinction being gained. Five pupils from this School also sat for the Cambridge School Certificate Examination, of whom 3 passed, 1 with Honours.

The successful candidates at the Cambridge Junior Local Examination from the Anglican Girls' School numbered 5 out of 7, and from the St. Joseph's Convent School 3 out of 7. One Distinction was gained by the Church of England High School.

**PRIMARY.**

The number of primary schools is the same as last year, namely, 58, of which 10 were Government, 27 Roman Catholic, 14 Anglican, 5 Wesleyan, and 2 Presbyterian.

The total number of scholars on the roll at 31st December, 1927, was 12,605, and the average attendance was 7,638—60.5 per cent. of the number on roll.

The total expenditure by the Government on primary education for the year was £8,755. Excluding administration and inspection, the cost to Government per pupil in average attendance at Government schools was £1 5s. 7d. and at grant-in-aid schools £1 0s. 6d.

The Matriculation Examination of London University has now been made the standard for winning the Grenada Scholarship, which is now awarded biennially.

**X.—Land and Survey.**

Grenada is a Colony of small proprietors, the number of estates over 100 acres in extent being only 142.

The following table shows the number of small holdings of land according to the Tax Rolls for the year 1927.

*Number of small holdings.*

<i>Total</i>	<i>2½ acres</i>	<i>Over</i>	<i>Over</i>	<i>Over</i>	<i>Over 10</i>	
<i>acreage.</i>	<i>and under.</i>	<i>2½ to 5</i>	<i>5 to 7</i>	<i>7 to 10</i>	<i>and under</i>	<i>Total.</i>
		<i>acres.</i>	<i>acres.</i>	<i>acres.</i>	<i>100 acres.</i>	
75,390	12,651	1,643	326	195	396	15,211

Land in possession of the Crown is of small area and consists principally of mountain ridges in forest, for preservation of the rainfall. The main portion is the Grand Etang Forest Reserve, to which frequent visits were made by the Crown Lands Superintendent and the boundary lines maintained.

There are no Crown lands available for settlement. Occasionally an estate is purchased by the Government for resale in small lots to peasants under convenient terms of payment spread over a number of years.

Only one survey was carried out by the Public Works Department during the year, in connection with the boundaries of Windsor, la Force, and Chantilly, under the Boundaries Settlement Ordinance.

**XI.—Labour.**

Labour chiefly consists of employment on the respective estates in the Colony and includes the following work :—

- (a) Overseers who are employed to supervise and control the gangs;
- (b) Drivers in personal charge of the gangs;

(c) Ordinary labourers, men and women, engaged on the actual details of work—working or ploughing the land, draining, weeding, cutlassing, pruning, manuring, etc., and reaping the produce.

Labour as in (b) and (c) above is also largely employed on the public roads of the Colony on breaking metal and general repair and surface oiling work.

The rates of pay would be approximately as follows :—

(a) £3 to £8 per month.

(b) 2s. to 4s. per day.

(c) Men, 1s. 2d. to 2s. per day; Women, 1s. to 1s. 4d. per day.

The daily rates of pay quoted above apply also to pay for “ task ” work and it is usually possible to undertake two “ tasks ” in a day.

Other labour includes masons, carpenters, mechanics, chauffeurs, bootmakers and the like. A fair number of masons and carpenters are more or less regularly employed by Government, and during the last two or three years there has been a reasonable amount of this class of work available for both under Government control and privately throughout the Colony, so much so that reliable mechanics of this class are exceedingly scarce. Quite a large number of chauffeurs are now employed in the Colony and a limited number of other mechanics are engaged in the motor shops and on other work connected with water works, pipe laying, etc.

The pay for these would be approximately as follows :—

Masons, carpenters and mechanics, 2s. to 7s. per day;

Chauffeurs, £3 to £5 per month.

### Miscellaneous.

A United States Army Squadron of four amphibian planes visited Grenada on 7th April in the course of their Pan-American flight under the leadership of Major H. A. Dargue. They landed at the beach at Queen's Park and proceeded next day to St. Vincent. The landing arrangements were reported to be satisfactory.

HERBERT FERGUSON,

*Administrator.*

GRENADA,

30th April, 1928.



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### Preface.

#### GEOGRAPHICAL DESCRIPTION.

1. The territories comprising the Uganda Protectorate lie between the Belgian Congo, the Anglo-Egyptian Sudan, Kenya, and Tanganyika Territory. The Protectorate extends from one degree of South latitude to the northern limits of the navigable waters of the Victoria Nile at Nimule. On the east its boundary extends from Mount Zulia, on the Sudan border, along the Turkana Escarpment to the crater of Mount Elgon (14,200 feet), and runs thence along the Malawa and the Sio rivers into the north-eastern waters of Lake Victoria; whilst the outstanding features on the western side are the Nile watershed, Lake Albert, the River Semliki, the Ruwenzori Range (16,794 feet), and Lake Edward.

#### HISTORICAL SURVEY.

2. The first British explorers to visit the country were Speke and Grant during their search for the Nile in 1862. Samuel Baker discovered Lake Albert shortly afterwards. Stanley reached Buganda in 1875, and was greatly impressed by the intelligence of

the natives. As the result of his appeal, the first band of missionaries arrived in June, 1877, followed two years later by a party of French Catholics. Both denominations quickly gained adherents, but on the accession of King Mwanga a systematic persecution of the Christians was inaugurated with the murder of Bishop Hannington in 1885. Mwanga was deposed by joint action of the Christians and Mohammedans in 1888, and fled to Sesse Islands in Lake Victoria. Religious antagonism soon revived, and the Christians were compelled to leave the country. They returned in 1889, and, after severely defeating the Mohammedans, restored Mwanga to his Kingdom.

3. Negotiations between the British and German Governments during the following year definitely placed Uganda under British influence, and Captain Lugard (now Lord Lugard, P.C., G.C.M.G., C.B., D.S.O.) proceeded inland on behalf of the Imperial British East Africa Company, and, despite opposition from the French missionaries, obtained Mwanga's signature, on the 26th December, 1890, to a treaty giving the British the right to intervene in the internal affairs of Buganda. This proved the signal for armed attacks from both Mohammedans and Catholic factions, and resulted in fighting, in which the Sudanese levies, collected by Captain Lugard to maintain his authority, with difficulty repulsed both their opponents' forces in detail. King Mwanga, who had sided with the French, escaped to German territory at Bukoba. He was persuaded ultimately to return, and an agreement was drawn up granting the Catholic and Mohammedan parties definite spheres of influence in Buganda. The position, however, proved unsatisfactory, and the British Government was forced by public opinion in England to assume direct control of affairs in 1894. Comparative quiet ensued for the next three years, until Mwanga instigated a rebellion, which was defeated by the Sudanese force under the Acting Commissioner, Colonel Ternan. Mwanga once more fled the country, his infant son, Daudi Chwa, the present ruler, being proclaimed King, or "Kabaka," at Kampala, under the guidance of three Regents. Discontent soon afterwards arose among a section of the Sudanese force; Mwanga returned to join the mutineers, aided by Kabarega, the rebel King of the Banyoro. Fortunately the Baganda remained loyal, and the outbreak was quelled after a year's fighting during which several British officers lost their lives. Mwanga and Kabarega were captured and deported. Since the early part of 1899 the country has been peaceful and British administration has spread over the neighbouring tribes. Control was extended over Busoga and Bunyoro on the 3rd July, 1896, whilst the arrangements for the inclusion of the other peoples within the existing frontiers were effected by Sir H. H. Johnston, between the years 1900 and 1902. Arrangements with the native governments of Buganda, Toro, and Ankole were negotiated by the same Commissioner for the purpose of regulating



the native administration and defining their relations with the Suzerain power. It was found advisable to suspend the Ankole Agreement in 1905, after the murder of the British Sub-Commissioner, but the subsequent loyalty of the natives justified the restoration of their privileges in 1912. Apart from this incident, the population has acquiesced in European rule, and only unimportant disturbances have occurred in outlying districts. The opening of the Uganda Railway from Mombasa to Lake Victoria in the early years of this century, and the subsequent installation of a steamer service on the Lake, proved a valuable stimulus to development, and have been largely responsible for the country's rapid progress in the thirty years of British administration.

4. During the Great War Uganda contributed in no small measure to the success of the operations in German East Africa. In the early part of the War, hostilities, in so far as Uganda was immediately concerned, were limited to outpost actions on the southern frontier, which was defended by the Police Service Battalion (native ranks officered by Europeans) together with native levies who were later organised as the Baganda Rifles. These forces were subsequently augmented by a company of the King's African Rifles and a battalion of Indian Infantry, the 13th Rajputs, while the necessary auxiliary services were organised locally. In the advance into German territory in 1916, and in the subsequent stages of the campaign, the native population of Uganda was largely drawn upon to maintain the personnel of the Carrier Corps and the King's African Rifles, while the great majority of the European non-official population and as many officials as could be spared from an inadequate civil establishment were enrolled in the local forces. There were 38,310 natives recruited for the Uganda Transport Corps (Carrier Section), as well as 1,741 as stretcher-bearers, etc.; 3,576 porters were supplied to the East African Carrier Corps, and 5,763 for service in German and Portuguese East Africa; and a special Congo Carrier Corps, for which 8,429 porters were raised, materially assisted General Tombeur and the Belgian forces in the capture of Tabora. In addition to the above, five battalions of the 4th King's African Rifles were raised and trained in the Protectorate. To provide for the full complement and to make allowance for wastage, over 10,000 men were required. Finally, in 1917, the African Native Medical Corps was recruited, with the co-operation of the Missions, from the ranks of the educated natives, and attained a strength of 1,000 including European personnel.

5. The year 1919 was marked by a famine of unusual severity, causing many deaths from starvation. The spread of rinderpest, an epidemic disease amongst Uganda cattle, increased to an alarming extent during the same year, but the stringent measures employed were successful in limiting the outbreak.

6. Great impetus has been given to the cotton industry in recent years, and increased output from this source is being reflected in the expansion of trade and in the general development of activities within the Protectorate.

#### ADMINISTRATIVE DIVISIONS.

7. The Protectorate was divided originally into six Provinces, but on the revised delimitation of the Eastern boundary in 1903 these were reduced to five—Buganda, Eastern, Western, Northern and Rudolf. Finally, at the beginning of 1926, a further re-adjustment of the boundary excluded Rudolf Province from the Protectorate. Until a survey of the country has been completed, it is not possible to furnish accurate statistics. For all practical purposes, however, the Protectorate may be said to cover an area of approximately 94,204 square miles, of which 15,017 square miles is water.

8. The population on the 31st December, 1927, was estimated to be 3,149,354, viz., 1,867 Europeans, 11,502 Asiatics, and 3,135,985 native inhabitants.

#### LANGUAGE.

9. For the past fourteen years Luganda, the language of the Baganda, who constitute roughly one-sixth of the indigenous population, has been recognised as the "official" local language. It is now proposed, however, to adopt measures to introduce Kiswahili, the general lingua franca of Eastern Africa, as the dominant language for educational and administrative purposes throughout a considerable area of the Protectorate. In the areas occupied by them, however, the various tribes use amongst themselves forms of language of their own. Thus in the north of the Protectorate and in parts of the Eastern Province Nilotic languages are spoken; and elsewhere, languages which can be classed neither as Bantu nor Nilotic but which are an intermixture of both are current.

#### CURRENCY.

10. Prior to 1920, the rupee currency was in circulation in Uganda, but during 1920 the florin currency was introduced. In 1922 this in its turn was displaced by the shilling currency which is now in use in the Protectorate, although the florin currency and notes, which are gradually being withdrawn, are still legal tender. The following coins and notes of the shilling currency are in circulation:—

*Coin:—*

Sh.1, which is legal tender for an unlimited amount.

50 cents. (= 6d.), which is legal tender for any amount up to 20s.

10 cents = $1\frac{1}{2}$ d.	} which are legal tender up to 1s.
5 cents = $\frac{3}{4}$ d.	
1 cent = $\frac{3}{16}$ d.	

*Notes:—*Shs.10,000, 1,000, 200, 100, 20, 10, 5.

### BANKS.

11. Banking facilities are afforded by the National Bank of India, Limited (branches at Entebbe, Kampala, and Jinja), the Standard Bank of South Africa, Limited (branches at Kampala and Jinja), and by Barclays Bank (Dominions, Colonial, and Overseas), (branches at Kampala and Jinja).

### WEIGHTS AND MEASURES.

12. The weights and measures in common use in the Protectorate are the Imperial weights and measures.

## I.—GENERAL.

13. In spite of temporarily adverse financial conditions the year under review may be regarded as one of progress.

14. Forecasts made in the previous year of a bad financial year in 1927 were, however, fully justified. For many years it has been noticed in Uganda that in cycles of approximately 10 years a season of excessive rain has been followed by a period of drought, causing over wide areas a shortage of crops, and even actual famine. These conditions, it was feared, would recur at the periodic point 1927-1928, and events have justified this fear. Rains failed during the planting season and in consequence the yield of cotton was poor. As the revenue of the Protectorate is mainly dependent on this crop, it was naturally seriously affected. It was, moreover, still further influenced by a substantial fall in the overseas prices of raw cotton. Thus the value of cotton exported during the year showed a decrease on that of the previous year of £1,360,000. At the same time in the areas least affected by decreased rainfall satisfactory progress has been made during the year in the expansion of the native coffee industry, which it is hoped will, in the not distant future, assume an importance in the economic life of the Protectorate second only to that of cotton.

15. In view of the serious financial prospect a Finance Committee was appointed early in the year to investigate questions relating to revenue and expenditure. As a result of its recommendations unnecessary services were curtailed, necessary services restricted, and the severest economy, consistent with efficiency, was introduced into every department of the service. It was fortunately, however, unnecessary to enforce any serious curtailment of medical and educational services, and progress and expansion in both these essential activities have been continued during the year.

16. Preparations for dealing with a possible famine were begun early, so that, when the famine actually started, the Protectorate found itself well organised to cope with any probable contingency.

Purchases by Government of food for relief purposes had commenced before the end of the year, and it is anticipated that the importation of extensive supplies may be necessary in certain areas before conditions revert to the normal.

A more pleasing aspect of the general economic situation is the prospect of the development of tin mining. Provision has been made for the first time in the draft Estimates of the Protectorate (1928) for the proceeds of a royalty on this metal. Further discoveries of tin were made and extended in Ankole during the year and it is hoped that the mining industry will rapidly develop during the coming years.

17. Communications and transport were still further improved during the period under review. By the end of the year the extension of the Kenya and Uganda Railway into Uganda was practically completed and arrangements have been made to open it on 10th January, 1928. It will then be possible to travel by train from Jinja to Mombasa. It is scarcely necessary to comment on the importance of this in connexion with the transport of cotton, the present repeated handling of which from railway to steamer and steamer to railway will be eliminated under the new conditions.

18. Native affairs remained satisfactory during the year. Two native laws of special importance, which will come into operation on 1st January, 1928, were passed in the Province of Buganda: one the *Busulo and Nvujo* law, whereby the rents and dues payable by native tenants to native landlords are limited and stabilised; the other, the *Luwalo* law, which regulates the ancient customary right to free labour from the peasants for public works to be undertaken by the Native Government.

19. The League of Nations International Sleeping Sickness Commission which assembled at Entebbe early in 1926 ceased its labours and was dissolved on the 30th June. The results of the Commission's work will be of the utmost importance to African administration as well as to science. Experiments and investigations in connexion with human and animal trypanosomiasis are being actively continued at Entebbe under the direction of Dr. H. L. Duke, O.B.E., who served as Chairman of the Commission which has now been dissolved.

20. The survey and experiments preliminary to the institution of an air mail and passenger service between Khartoum and stations in the East African Dependencies have been continued during the year by the North Sea Aerial and General Transport, Limited, but have been unfortunately delayed by a series of unlucky accidents. The project, however, towards the expenses of which the interested Government are contributing, has not been abandoned, and it is hoped that the preliminary survey will be brought to a successful conclusion during the coming year.

## II.—FINANCE.

### General Position.

21. The Surplus Balances on the 31st December, 1927, stood at £1,089,204. Although they decreased by £138,670 during the year, this reduction was anticipated in framing the 1927 Budget, as provision was made for drawing upon Surplus Balances to the extent of approximately £200,000 to provide for an extended building programme. The revenue for the year fell short of the estimate by 68,105 and this is solely attributable to low cotton prices and unfavourable weather conditions, which adversely affected the receipts from Customs. The expenditure of the year, however, fell short of the estimate by £128,924.

The subjoined table gives the final results for the last five years :—

				<i>Revenue.</i>	<i>Expenditure.</i>
				£	£
1923	...	...	...	999,750	938,999
1924	...	...	...	1,239,789	918,662
1925	...	...	...	1,479,284	1,108,396
1926	...	...	...	1,389,641	1,295,612
1927	...	...	...	1,292,306	1,430,976

### Revenue.

22. The total collections for the year amounted to £1,292,306 representing a decrease of approximately 7 per cent. on the receipts of 1926. This reduction is mainly accounted for by the reduced receipts from Customs, other sources of revenue having maintained, and in some cases exceeded, their 1926 level.

### Expenditure.

23. Ordinary expenditure, i.e., exclusive of loan, was estimated at £1,559,900, but was actually £1,430,976. The saving of £128,924 was effected by the adoption of a policy of strict economy as soon as it was evident that the cotton crop would not reach expectations.

### Loans.

24. The following table gives the position in regard to loans to the end of the current year :—

<i>Designation and amount of loan.</i>	<i>Amount received.</i> £	<i>Sinking fund repaid and interest thereon.</i> £ s. d.	<i>Balance outstanding on 31/12/1927.</i> £ s. d.	<i>Remarks.</i>
Busoga Railway, £170,000 ...	170,000	32,802 13 1	137,197 6 11	Interest 3½ per cent., sinking fund at the rate of 1½ per cent.
Kampala-Port-Bell Railway and improvements in the communications in the Eastern Province, £215,000.	125,000	27,378 13 6	97,621 6 6	Interest 3½ per cent., sinking fund at the rate of 1½ per cent.
Imperial Loans Ordinance, 1915 (Railway and Road Development), £329,000.	329,000	6,223 4 5	322,776 15 7	Loan received in instalments on varying dates. Repayment by means of annuities of interest and sinking fund.
Development Loan for general Services, £550,000.	550,000	—	550,000 0 0	To be repaid to the Imperial Treasury by the Uganda Government raising a loan.
	£1,174,000	£66,404 11 0	£1,107,595 9 0	

### III.—PRODUCTION.

#### Agriculture.

##### COTTON.

25. The total value of domestic produce exported from the Protectorate during the year amounted to £2,310,260 compared with £3,597,437 for the preceding twelve months.

The value of ginned cotton exported amounted to £1,690,838 representing 131,728 bales and approximately 73.19 per cent. of the total exports, compared with £3,051,791 and 85 per cent. in 1926.

The decline in the price of cotton on the world's markets is clearly indicated in the figures above, although the 1927 cotton crop was considerably less than that of the previous year, due to unfavourable weather conditions and the reduced acreage planted in the Buganda Province in 1926.

26. In spite of the lower prices paid for the product in the early months of the year, the beginning of the 1927 cotton planting season was marked by great activity on the part of the growers in the preparation of land for the new crop, but much of this effort was rendered abortive as far as cotton planting was concerned, especially in the Eastern Province, by adverse weather conditions, which made the planting season the most difficult yet recorded. Less than half the average rainfall fell during the sowing season in this Province and many plots prepared for cotton could not be sown and considerable anxiety was also caused with regard to the food crop position.

Planting conditions were less adverse in the Buganda Province, but rainfall was irregular and unevenly distributed, whilst conditions in the Northern Province were more or less similar.

It was estimated that the total acreage planted in the Protectorate with cotton amounted to 533,004 acres, of which 302,600 were in the Eastern Province and 200,000 in the Buganda Province. This was approximately 37,185 acres less than the revised figures (570,189 acres) planted in 1926, and the increased acreage in Buganda Province only partially compensated for the decline in the Eastern Province.

The second or "short" rains (September-October) in the Eastern Province were inadequate and although these conditions were favourable from the point of view of the minimizing of diseases and pests on the crop, the yield prospects of the later plantings were adversely affected, and the food crop position in some areas became a serious one. In the Buganda Province the position was satisfactory and the prospects of a good yield were favourable at the close of the year.

Under Section 40 of the Cotton Ordinance a period of four weeks was prescribed from the beginning of the buying season, during

which no raw cotton other than "good" or "ordinary" could be bought or sold in five districts of the Eastern Province and only "good" in one, namely, in Busoga District. These efforts made to improve the condition of the crop at the time of marketing met with a definite measure of success and helped to raise the average standard of the lint exported. It is intended to continue and extend these measures during the cotton buying season 1927-28.

On 1st January, 1927, the Cotton (Tax) Ordinance, 1926, came into force. This Ordinance amended the previous Ordinance in respect of the basis of taxation, which from the above date is calculated on a sliding scale according to the closing price on the Liverpool Cotton Exchange on the 14th, 15th or 16th day of December, whichever shall be the last day on which business is done in respect of June American "middling" futures. The tax varies from nothing at 6d. or below to 9 cents above 15d. The tax for 1927 was 2 cents (3d.) per lb. of lint and realised £51,478 compared with £199,897 the previous year, when the tax was at the fixed rate of 6 cents per lb.

There were 186 ginneries licensed to gin and bale cotton during the year, of which number 177 were actually worked. No fresh sites for the erection of ginneries were granted during the year, and the number of factories already built is in excess of the requirements of the cotton industry. In the local market transactions in baled cotton were very numerous, and particulars of registered contracts representing 120,193 bales were recorded.

Of the 131,728 bales exported in 1927 from Uganda, 35,125 went to the United Kingdom, 65,846 to India, and 29,697 direct to Japan.

Exports of cotton seed amounted to 29,500 tons, valued at £170,303, compared with 35,360 tons, valued at £194,887, in 1926.

#### COFFEE.

27. The acreage under *coffea arabica*, which is the principal crop grown by non-natives, was 13,230 acres in 1927. If these figures are compared with those given in 1922, viz., 20,245 acres, it will be seen how this variety of coffee has declined in favour in five years, and this is especially noticeable in the lower and more humid parts of the country, which are not climatically favourable for the successful cultivation of this coffee. On the other hand the acreage under *coffea robusta* cultivated by non-natives has increased from about 455 in 1922 to 4,682 in 1927.

The native coffee industry made further progress during the year and the demand for seedlings was greater than the supply. *Coffea robusta* is the variety encouraged; good types of seed have been selected by the Department of Agriculture and large numbers of nurseries were laid out in Buganda Province and elsewhere as centres for distribution of coffee plants to natives. The estimated



acreage under native-grown *coffea robusta* is 2,835. The acreage under *coffea arabica* grown by natives in the Bugishu hills around Mount Elgon increased from 573 in 1926 to 844 in 1927. The exports of coffee from the Protectorate during the year amounted to 43,514 cwt. valued at £170,407, compared with 33,211 cwt. valued at £147,884 in 1926.

#### RUBBER.

28. Para rubber (*Hevea Braziliensis*) is grown by non-natives, the area under cultivation, 11,828 acres, being approximately the same as in 1922. Exports again showed a substantial increase to 1,446,300 lb. compared with 1,356,100 lb. in 1926. The valuation, however, was lower at £82,077, against £135,619 the previous year.

#### MISCELLANEOUS CROPS.

29. Amongst miscellaneous crops which figure in the export list priority must be given to *Sugar*. The sugar factory established in 1925 at Lugazi between Kampala and Jinja is well equipped and capable of manufacturing 4,000 tons of sugar per annum. The factory is now being enlarged to increase the capacity to 5,000 tons. A local market in Uganda and Kenya is available for the whole of the present output, but during the year 10,161 cwt. valued at £16,371 were exported to other territories.

In connexion with this sugar factory a distillery has been erected, and is producing large quantities of power alcohol for local consumption; whilst 638 gallons of methylated spirits were exported.

The *Tobacco* industry is making satisfactory progress in Bunyoro, and produce sales at good prices have been made on the home market.

The acreage under *Tea* has increased from 188 to 239, and the locally manufactured product finds a ready sale in this country and Kenya.

Exports of *Simsim* increased to 718 tons valued at £13,732 compared with 194 tons valued at £4,130 in 1926, whilst *Chillies* showed a slight increase in quantity and a considerable increase in value due to the marked rise in price towards the end of the year.

Amongst other crops *Rice* must be mentioned. This crop is now established in the Eastern Province, and is a popular one amongst some tribes, and its use as an additional food crop is becoming more appreciated.

*Maize* cultivation is extending rapidly as an additional food crop, although exports have not been made in the past owing to the transport costs. With the advent of railways, maize exports become an economic proposition.

30. The following comparative table shows the principal commodities exported during the last five years :—

Articles.	Unit.	Year ended 31st December, 1923.		Year ended 31st December, 1924.		Year ended 31st December, 1925.		Year ended 31st December, 1926.		Year ended 31st December, 1927.	
		Quantity.	£	Quantity.	£	Quantity.	£	Quantity.	£	Quantity.	£
Cotton, Raw...	Centals	352,184	2,026,820	514,418	3,486,565	784,152	4,685,992	723,438	3,051,791	526,911	1,690,838
Cotton, Seed ...	Tons	9,794	52,964	21,093	106,280	21,928	122,790	35,360	194,887	29,500	170,303
Coffee, Raw ...	Cwt.	40,931	108,490	41,093	167,696	29,883	139,469	33,211	147,884	43,514	170,407
Rubber, Plantation	Centals	3,986	9,926	6,083	18,911	8,058	68,704	13,561	135,619	14,463	82,077
Groundnuts ...	Tons...	175	2,714	89	1,446	41	820	380	6,026	2	40
Simsim, Seed	Tons...	1,435	24,383	740	15,602	214	4,523	194	4,130	718	13,732
Sugar, Refined	Cwt.	—	—	319	698	4,053	7,447	1,255	1,599	10,161	16,371
Hides, Dry and Dry Salted.	Cwt.	10,423	28,855	7,172	24,347	7,027	29,843	7,640	27,357	29,619	99,541
Skins, Sheep and Goats.	No. ...	314,914	14,839	274,915	14,175	55,350	4,014	88,750	5,173	78,411	4,091
Ivory ...	Cwt...	807	58,673	269	22,909	307	28,535	202	18,289	499	34,574
Metalliferous Ores, Non-Ferrous.	Tons...	—	—	—	—	—	—	—	—	117½	20,875

Note.—1 cental=100 lb.

Note.—Export figures as from the 1st January, 1924, represent actual shipments from Mombasa, whereas all figures prior to that date represent exports from Uganda ports.

### Forestry.

31. The activities of the Forestry Department include the conservation and exploitation of forests throughout the Protectorate, afforestation, and supervision of concessions. The principal sources of the supply of timber are the Minzira forest, near the Tanganyika border, the savannah forests of Busoga, and, in a lesser degree, the Budongo forest in Bunyoro. Of these the first is the most important. At the end of the year concessions covering an area of 329 square miles were being exploited, and 47 square miles of the Minzira forest were being developed by the Public Works Department, which took over this forest from the Forestry Department in 1926 in order to supply the growing demands of the Public Works Department itself and of the Railway. Regeneration and planting operations extended over an area of 152 acres during the year. The total area planted now amounts to 1,196 acres. Seeds of several interesting exotic trees were introduced including *sequoia gigantea*, *sequoia sempervirens*, *cryptomeria japonica*, *santalum cygnorum*, and *gingko biloba*.

Forestry matters in Uganda have not in the past, for various reasons, always received the attention due to them. In October, however, the Governments of Uganda and Kenya obtained the services of a member of the Indian Forests Service, who will act as Adviser in Forestry to these Governments, and it is hoped that the development of the forest resources of the Protectorate may be greatly extended in the future.

The principal timbers of commercial value are :—*Chlorophora Excelsa* (Mvule), *Juniperus Procera* (Tolokyo), *Podocarpus Gracilior* (Musenene), *Entandrophragma Utilis* (Miovu), *Khaya Anthotheca* (Munyama); and the total output of such timber from Government forests during the year was 421,878 cubic feet.

### Fisheries.

32. A fairly large fishing industry exists for the supply of fresh fish to all classes of the community living near Lakes Victoria, Albert, and Kioga. The industry is almost entirely in the hands of natives, who chiefly employ nets to catch the fish, though several Indians are actively interested in the industry. Little is known about the species and habits of the fish in the Lakes mentioned, but an expert from the Ministry of Agriculture and Fisheries is at present engaged on making a complete survey of the fisheries of Lake Victoria. His report, which it is hoped will be issued next year, should be of considerable value in assisting the Governments of Uganda, Tanganyika Territory, and Kenya to frame regulations for the control of fishing and fish preservation and thus place a valuable potential industry on a sound basis. A similar survey of Lake Albert will be undertaken in 1928.

### **Mining.**

33. The interest shown by prospecting and mining companies in the possibilities of Uganda as a mineral-bearing country was fully maintained during the year under review, and it is estimated that a sum of £20,000 has been spent by them in prospecting operations.

Practically the entire operations have been confined to the Western Province, along the southern boundary of which are situated the deposits of tin ore located first in 1925. Further deposits of detrital tin ore have been revealed but all endeavours to locate an alluvial field have been unsuccessful. For the first time in the history of the Protectorate minerals were exported in commercial quantities when the Kagera (Uganda) Tinfields, Limited, sent out 114 tons, valued at £22,536, from its Mwirasandu mine in Southern Ankole.

A well organised prospecting party under the Tanganyika Concessions, Limited, covered the remaining portions of the Western Province and located a copper lode in the south-eastern end of the Ruwenzori range early in the year. The surface extent of this has been revealed by systematic trenching but its assay value and its persistence in depth are still the subject of investigation.

At the end of the year eight exclusive prospecting licences were in force for a total area of 8,456 square miles.

## **IV.—TRADE AND ECONOMICS.**

### **General.**

34. Kenya and Uganda being one administrative unit for purposes of Customs, complete freedom of trade between the territories exists. For this reason, and on account of the very intimate trade connexion between the countries, a detailed examination of the external trade of each territory separately is a matter of very considerable difficulty, particularly in view of the fact that virtually the whole of the imports and exports of both Dependencies pass through Mombasa, the principal port of Kenya. In consequence the combined trade figures represent generally the landed value at Mombasa in the case of imports and the "f.o.b. Mombasa" value in the case of exports, these being the declared values for purposes of Customs.

As, however, the division of Customs Revenue is based on the consumption of dutiable articles in each territory, every endeavour has been made to calculate the actual imports into Uganda with the greatest possible accuracy, exports being divided according to the declaration of the shippers. Succeeding paragraphs under the headings of "Imports" and "Exports" deal briefly with the information so obtained.

The Customs Management Ordinance, 1926, was brought into force in both territories by Proclamation with effect from 1st June,

1927. The Customs Management laws, regulations and forms of Kenya, Uganda, Tanganyika Territory and Zanzibar are now closely co-ordinated, and it is hoped that the large measure of uniformity secured in this connexion will prove of benefit to all those connected with the inter-territorial and overseas trade of the East African Dependencies.

The free interchange of local produce between Kenya, Uganda, and Tanganyika Territory has been allowed since 1st January, 1923. By agreement between the three Governments this principle was extended to imported goods as from 1st August, 1927, the Customs Revenue involved being credited to the consuming territory. The value of this further lowering of the barriers to inter-territorial trade has already been amply demonstrated as apart from being freed from the necessity for paying double duty, merchants are now enabled freely to transfer their stocks to meet seasonal requirements in any of the three territories. In this manner the consequences of over-stocking in a particular district (an ever present contingency in any country dependent on agriculture) are rendered considerably less serious and the whole basis of trading in imported goods in Eastern Africa is improved accordingly.

35. Trading conditions during the year were very unfavourable owing to the decreased purchasing power of the native population, due to the double set-back to the cotton trade of Uganda from a serious fall in the overseas price of raw cotton and a disappointing crop yield. In the early part of the year the position occasioned some anxiety, but despite severe losses to merchants engaged in the native trade, and particularly to importers allowing long credit terms, the markets as a whole have proved surprisingly resilient and a gradual recovery attended by absorption of accumulated stocks has taken place. This process was undoubtedly assisted by the extension of the "free trade area" which, as explained above, now includes Tanganyika Territory, and at the close of the year stocks on hand in Uganda were relatively small.

### Imports.

36. The total value of trade imports into Uganda for consumption in the territory was £1,819,961 as compared with £2,114,044 in 1926. For the reasons given above these figures are quoted in terms of "landed value Mombasa," the cost of handling and freight to Uganda not being included.

*Cotton tissues and manufactures* continue to constitute the main item of import trade, and notwithstanding increased quantities of dyed and coloured piece goods and cotton thread imported, the total value of imports during 1927 shows a decrease of £91,276 as compared with 1926, viz. :

		1926.	1927.
		£	£
Cotton Piece Goods	... ..	531,664	457,351
Blankets	... ..	68,023	48,706
Yarns and Manufactures	... ..	12,103	14,457
		<hr/>	<hr/>
		£611,790	£520,514

*Tobacco.*—The value of imports of cigarettes, cigars, and tobacco fell from £89,462 in 1926 to £79,018 during the year under review.

*Bicycles.*—Imports under this important item of native trade decreased from 10,409 valued at £83,814 to 3,133 of a value of £22,497 imported during 1927. Bicycles for native use are still on the borderline separating essentials from luxuries, and in consequence the volume of trade in this article furnishes an accurate indication of the relative prosperity of the native population.

A general contraction in imports took place in 1927 owing to adverse crop conditions, the other main items showing decreases being motor spirit, kerosene, industrial machinery, agricultural machinery, galvanized iron sheets, jute bagging and sacking, other textile manufactures, and motor cycles. Comparative figures relative to the above are as follows:—

## IMPORTS.

Articles.	Unit of Quantity.	1926.		1927.	
		Quantity.	Value.	Quantity.	Value.
			£		£
Galvanized Sheets, corrugated.	Ton	2,120	43,355	1,627	31,360
Agricultural Machinery and Parts.	Ton	24	2,055	7	604
Industrial Machinery and Parts.	Ton	972	90,098	459	45,640
Jute Bags and Sacks ...	Dozen	67,126	44,724	{ 46,929 }	25,575
" " " ...	Cwt.	16,321		{ 11,469 }	
Other textile manufactures.	Value	—	41,404	—	22,030
Motor Spirit ... ..	Imp. Gall.	881,783	65,333	893,234	54,751
Kerosene Oil ... ..	"	542,194	24,676	519,832	22,017
Motor Cycles ... ..	No.	336	14,282	{ 122 }	5,129
Motor Cycles, Sidecars for	No.			{ 34 }	

## Exports.

37. The total value of the domestic exports of Uganda during 1927 in terms of " f.o.b. value Mombasa " was £2,310,260 as compared with £3,597,437 in 1926.

*Cotton.*—The outstanding item in the list of Uganda exports decreased in value from £3,051,791 in 1926 to £1,690,838 during the year under review, the average declared value f.o.b. Mombasa

being £4 4s. 5d. per cental of 100 lb. in 1926 as against £3 4s. 2d. in 1927. The quantity exported declined from 723,438 centals in 1926 to 526,911 centals in 1927.

*Cotton Seed.*—There were 29,500 tons of cotton seed valued at £170,303 exported in 1927 as compared with 35,360 tons valued at £194,887 shipped during 1926.

*Rubber.*—The quantity exported shows an increase of 902 centals, but as a result of the fall in overseas market prices the value shows a decrease of £53,543.

Satisfactory increases are recorded under exports of hides and skins, sugar, sesame seed, and ivory, comparative figures being as follows :—

#### EXPORTS.

Articles.	Unit of Quantity.	1926.		1927.	
		Quantity.	Value. £	Quantity.	Value. £
Sugar, Jaggery ... ..	Cwt.	273	214	437	425
Sugar, Refined ... ..	Cwt.	1,255	1,591	10,161	16,371
Seed, Sesame ... ..	Ton	194	4,130	718	13,733
Hides, Dry and Dry Salted	Cwt.	7,640	27,357	29,619	99,541
Ivory, Elephant ... ..	Cwt.	202	18,287	499	34,574

*Metalliferous Ores, Non-Ferrous.*—This item appears for the first time in the list of Uganda exports and is a result of tin mining operations in Uganda, 117½ tons tin ore valued at £20,875 being exported during 1927. The principal countries of destination were Great Britain and the Straits Settlements.

38. For further particulars in regard to imports and exports, e.g., sources of supply, countries of destination, etc., reference is invited to the Annual Trade Report of Kenya and Uganda in which full details will be found.

## V.—COMMUNICATIONS.

### Railways.

39. There are two short lines of railway in the Protectorate, both metre gauge. The first connects Kampala with its nearest port on Lake Victoria, Port Bell, seven miles distant. The other line, the Busoga Railway, links Lake Victoria and the navigable reaches of the Victoria Nile, where the river opens out into Lakes Kioga and Kwania. This railway is 62 miles in length, and runs from Jinja, near the source of the Nile, to Namasagali, the headquarters of the Busoga Railway Marine. Weekly communication is provided with Masindi Port and various other ports on the shores of Lakes Kioga and Kwania where channels afford access through the beds of floating “sudd.” There is also a steamer service on Lake Albert, with headquarters at Butiaba, affording regular communication with the north-eastern confines of the Belgian Congo at Mahagi

and Kasenyi and with the Nile ports as far north as the Sudan frontier post at Nimule. Both railways and steamer services are managed by the Kenya and Uganda Railway Administration.

40. In addition to the railways mentioned above, there is an extension of the Kenya and Uganda Railway, which enters the Protectorate a few miles east of Tororo in the Eastern Province and proceeds in a westerly direction until it joins the Busoga Railway at Mbulamuti. Jinja on Lake Victoria is thus now linked with Mombasa on the coast, 896 miles distant. A further extension from Tororo northwards to Soroti via Mbale and Kumi, a distance of 95 miles, is also being undertaken. Progress with this line has been very satisfactory and it is hoped that Soroti will be reached early in 1929.

### **Lake Services.**

41. During the year a survey was made of the Kagera River, which discharges into Lake Victoria at a point approximately midway between the northern and southern limits of the western shore of the Lake, to ascertain its navigable possibilities for the purpose of conveying the products of the tinfields of Ankole to the Lake. The results of the preliminary survey were encouraging and further survey and investigation are in progress with a view to establishing a tug and lighter service in the near future, which it is hoped will extend to a point 104 miles from the mouth of the river.

42. There is a weekly lake service connecting Entebbe, Port Bell (Kampala), and Jinja with Kisumu, and a fortnightly service to the other ports on Lake Victoria.

### **Motor Transport and Roads.**

43. Information as to the maintenance and improvement of existing roads is given in Section VII (Public Works). Apart from the roads maintained by the Public Works Department a considerable mileage of good motor roads is kept up by the native administrations.

44. Owing to the great development of private enterprise in transport services, which has rendered superfluous in a great degree the maintenance by the Government of a transport service for the general public, it was decided to abolish the Transport Department as a separate department and to merge it in the Public Works Department as a section of that department. Arrangements effecting this change were made towards the end of the year and thus a department, which for many years has done very valuable work and is closely associated with the progress of Uganda, has disappeared. Such transport work as the Government now requires to be done is performed by what is now known as the Transport Section of the Public Works Department.



### **Aviation.**

45. A landing ground is kept up at Jinja and landing facilities for sea-planes exist at Entebbe, Port Bell (near Kampala), and Butiaba, although there is no accommodation for housing aircraft in the Protectorate. Repairs can be carried out at Jinja, Kampala, and Butiaba. An Ordinance entitled the "Aerial Navigation Ordinance, 1927," to regulate air traffic and the importation of goods by air, was enacted during the year. In addition to this certain sections of the British Air Navigation Act, 1920, are applied to the Protectorate by the Air Navigation (Colonies and Protectorates) Order in Council, 1922.

46. Negotiations with the North Sea Aerial and General Transport, Limited, for the carrying out of an experimental air survey of the route from Khartoum to Kisumu, were concluded in 1926 and the first flight was made in February, 1927. Owing to an unfortunate series of mishaps, however, the flights were discontinued in March and were not resumed again until October, when a further mishap to the experimental machine precluded further operations before the end of the year. Arrangements have now been made by the North Sea Aerial and General Transport, Limited, for the flights to be completed in 1928 by the Alan Cobham Aviation Company, Limited. From the flights undertaken sufficient information has been furnished to demonstrate the practicability of a service between Khartoum and Kisumu.

### **Posts and Telegraphs.**

47. Having regard to the state of trade generally, the financial results of the year's working of the Post and Telegraph Department, which is amalgamated with that of Kenya under the control of a Postmaster-General at Nairobi, were satisfactory. The Protectorate's share of the revenue rose from £42,709 in 1926 to £45,260, an increase of approximately 6 per cent. There was a slight reduction of £306 in the gross total of expenditure as compared with 1926. Recurrent expenditure amounted to £42,919 as compared with £39,133 in 1926, whilst capital expenditure totalled £4,983 as compared with £7,969 during the preceding year.

The various postal, telegraph and telephone services were satisfactorily maintained during the year. Their scope and rate of development are adequate to the needs and resources of the Protectorate.

The telegraph system was extended during the year by the addition of 116 miles of new line and 120 miles of duplicate line.

The total mileage of telegraph and telephone pole route at the end of the year was 1,597, and the wire mileage 3,432. With the exception of outlying districts in the Northern and Eastern Provinces all administrative centres are connected by telegraph.

48. The Post Office Savings Bank continues to increase in popularity. The balance standing to the credit of depositors increased from £15,188 to £18,674 during the year. Deposits increased by 51 per cent. in number and 45 per cent. in value, whilst withdrawals increased by 76 per cent. in number and 39 per cent. in value.

The total number of depositors rose from 990 to 1,224. Of the foregoing 862 were Africans, representing an increase of 127 over the previous year.

## VI.—JUSTICE, POLICE, AND PRISONS.

49. The criminal statistics for the year under review show a considerable increase in crime, mainly in municipal, road, and other miscellaneous minor offences. There was also an increase in civil litigation. The following tables give particulars of the criminal and civil jurisdiction for the last 5 years : —

### CRIMINAL.

Year.	<i>Discharged for want of evidence.</i>	<i>Convicted.</i>	<i>Acquitted.</i>	<i>Found Insane.</i>	<i>Total Number of persons.</i>	<i>Total Number of cases.</i>
1923 ...	167	3,936	483	5	4,591	3,509
1924 ...	194	3,917	658	3	4,772	3,781
1925 ...	445	5,747	484	4	6,680	5,410
1926 ...	374	5,932	388	3	6,697	5,141
1927 ...	418	6,630	695	3	7,746	6,284

### CIVIL.

Year.	<i>Amounts of Shs. 300 and under.</i>	<i>Amounts above Shs. 300 to Shs. 1,000.</i>	<i>Amounts above Shs. 1,000 to Shs. 3,000.</i>	<i>Amounts above Shs. 3,000.</i>	<i>Value not stated.</i>	<i>Total.</i>
1923 ...	695	363	169	45	20	1,292
1924 ...	589	322	146	51	5	1,113
1925 ...	717	511	262	68	7	1,565
1926 ...	1,271	836	342	105	17	2,571
1927 ...	1,874	1,038	497	104	28	3,341

### APPELLATE JURISDICTION.

Year.	<i>Appeals—</i>		<i>Confirmation of death sentence.</i>	<i>Revision— Civil</i>		<i>Total.</i>
	<i>Civil.</i>	<i>Criminal.</i>		<i>Reference.</i>	<i>Criminal.</i>	
1923 ...	4	22	17	1	41	85
1924 ...	17	44	15	3	40	119
1925 ...	9	42	9	1	104	165
1926 ...	17	36	3	4	47	107
1927 ...	17	46	9	1	50	123

50. There were 744 native courts in the Protectorate in 1927, the supervision and inspection of which were carried out by administrative officers as in previous years. The returns from these courts show a total of 66,412 cases for the year, the judgments of 855 of which were reversed or varied on revision or appeal.

51. The authorised establishment of the Protectorate Police Force for the year was 29 officers and 4 European non-commissioned officers, 3 Asiatic non-commissioned officers and 1,329 native non-commissioned officers and men; of this number 3 officers, 2 European non-commissioned officers, 2 Asiatic non-commissioned officers and 80 native ranks were apportioned to the Criminal Investigation Branch.

The maintenance of law and order among the natives is materially assisted by native retainers with powers delegated to them by the various native chiefs to whom they are subordinate. They act as police and as prison warders on behalf of their chiefs.

There is a central Protectorate gaol at Kampala. A new central gaol is in course of construction near Port Bell, which, when completed, will accommodate about 1,000 prisoners. In addition to the central gaol there are 15 district gaols. The number of prisoners in Protectorate gaols on 31st December, 1927, was 2,597.

## VII.—PUBLIC WORKS.

52. The total expenditure on public works for the year under review amounted to £382,981 as compared with £369,469 in 1926. This expenditure was made up as follows:—

	£
Public Works Department Personal Emoluments ... ..	55,744
Public Works Department Special Temporary Staff ... ..	4,382
Public Works Department Other Charges ...	15,161
Public Works Department Annually Recurrent	58,980
Public Works Department Extraordinary ...	223,452
Government Timber Supply ... ..	5,342
Government Timber Supply, Development of Minzira Forest ... ..	3,873
Imperial Loan Ordinance, 1915 ... ..	8,653
Development Loan ... ..	439
Other Departmental Votes and Private Accounts	6,955
	<hr/>
	£382,981

53. Of this amount £158,742 were spent on buildings, the most important of which were the new Treasury Offices, Entebbe, the Agricultural Laboratory, Kampala, part of the Central Gaol at Luzira, and buildings for the Education and Medical Departments and the military headquarters at Bombo. Owing to the difficulty experienced in finding suitable contractors to erect buildings for the native administrations, a certain amount of building work for these administrations was also undertaken by the Public Works Department.

54. The expenditure on the maintenance and improvement of existing roads was £33,771. The mileage of roads maintained at a cost of £29,671 was 1,361. The balance of £4,100 was spent on improvements which largely consisted in improving and widening bad corners. Expenditure on new road work or roads taken over by the Public Works Department from the native administrations amounted to £18,660, including a sum of £6,041 spent on permanent bridges and culverts on 2nd and 3rd class roads.

55. Good progress was made during the year with the installation of a water supply in the township of Jinja. The expenditure on this work in 1926 amounted to £2,725, and in 1927 to £29,173. It is estimated that the installation will be completed in 1928 at a total cost of £39,200.

Boring operations in the neighbourhood of Kampala for the purpose of obtaining a water supply for that township were continued, but with disappointing results. The idea of utilizing water from bore-holes has, therefore, been abandoned and a scheme for obtaining a supply from Lake Victoria is now under consideration.

56. Operations in the Minzira Forest were continued during the year, but development was somewhat curtailed pending further consideration of the granting of concessions to the public in this forest and in the adjoining forests in Tanganyika Territory, which the Governments concerned are prepared to do if suitable arrangements can be made. Such timber as the Public Works Department and Railways required was, however, extracted.

57. Alternative sites for the construction of a road bridge across the River Nile at Jinja were surveyed; but further progress with the project has been suspended until it has been definitely decided which route the railway extension to Kampala will follow.

58. The following were the average numbers of skilled labour employed by the Public Works Department during the year:—

	<i>Africans.</i>	<i>Asiatics.</i>
Carpenters ... ..	90	264
Masons ... ..	477	55
Painters ... ..	40	3
Blacksmiths ... ..	13	5
Mechanics, Fitters, etc. ... ..	—	22
Brickmakers, Sawyers, etc. ... ..	404	—
	<hr/> 1,024	<hr/> 349

The average number of unskilled labour employed each month was 9,537. All of these were Africans.

**VIII.—PUBLIC HEALTH.**

59. The activities of the Medical Department were further extended during the year. There were 480,516 new cases recorded as having attended the various Government hospitals, dispensaries, treatment centres, etc. This is an increase of 100,117 cases over the number recorded for 1926. The increase for each year over the preceding year during the last eight years is shown in the following table :—

1920	...	...	...	...	...	...	62,405
1921	...	...	...	...	...	...	93,884
1922	...	...	...	...	...	...	121,889
1923	...	...	...	...	...	...	184,601
1924	...	...	...	...	...	...	257,677
1925	...	...	...	...	...	...	312,416
1926	...	...	...	...	...	...	380,399
1927	...	...	...	...	...	...	480,516

The total number of attendances at the various medical units numbered 2,038,448, as compared with 1,795,358 in 1926, an increase of 243,080. The total number of cases admitted to wards was 21,562, and the aggregate number of in-patient days' treatment was 420,743. This gives an average daily number in wards 1,153, as compared with 970 for 1926. There were 3,383 surgical operations performed in the year: 2,127 were recorded for the previous year. Deaths in hospital showed a decrease of 286, the figures for 1927 being 1,111 and for 1926, 1,397. This was largely accounted for by the decrease in the number of cases of dysentery during the year and the absence of a virulent epidemic form of this disease.

60. There are four Government European hospitals, nine Asiatic hospitals, twenty-eight native hospitals, and eleven isolation hospitals in the Protectorate. These provide beds for 27 Europeans, 51 Asiatics and 1,391 natives. In addition there are 97 beds in isolation hospitals which may be used for either Asiatics or natives. Grants are made by Government towards the cost of medical training of both native attendants and midwives at Mission hospitals and Maternity Training Schools.

61. Perhaps the most outstanding feature of the year from the medical point of view is the position revealed regarding the vital statistics of the general native population. The figures for the death rate, the birth rate, the infantile mortality rate, and the excess of births over deaths are in all cases better than they have ever been. It would appear that they reflect the advantage which has accrued to the general native population as a result of the intensive development of the organisation for their treatment at

hospitals, dispensaries, and at maternity centres which has taken place during recent years. The first report of an excess of births over deaths in Buganda occurred in 1924, and was represented by the modest figure of 37. It was conjectured that the absence of serious epidemics was a factor in the improvement then recorded. The excess of births over deaths now recorded for the five districts rendering returns is 17,000 and indicates that the position is being consolidated and that a progressive increase in the native population can now be confidently predicted.

62. Syphilis, malaria, yaws, and ulcers are the four most common diseases of the country in the order shown. Pneumonia, dysentery, and injuries account for the largest number of deaths in hospital. Plague and sleeping sickness required more attention than usual during the year.

63. *Trypanosomiasis Institute*.—A Research Institute is to be set up at Entebbe for the study of human trypanosomiasis, to continue the work commenced by the International Sleeping Sickness Commission of the League of Nations.

### IX.—EDUCATION.

64. The schools throughout the country have settled down to the new organisation adopted during 1926, and everywhere a serious attempt is made to bring them up to the standard required by the new syllabuses.

It was impossible during 1927 to exercise sufficient supervision and control over the schools of the various grades throughout the country owing to insufficiency of headquarter staff, but in spite of that it is quite clear that progress has everywhere been maintained.

Girls' education is going ahead and the special Girls' School syllabuses, which include such subjects as domestic science adapted to local conditions, practical hygiene, and child welfare, are appreciated by teachers and pupils alike and are being followed as far as possible in all girls' schools.

Makerere College, which stands at the top of the educational system for boys, is beginning to make itself felt through the pupils who are now passing out into the public services of the country.

Three ex-students have this year been posted as medical assistants, one agriculturist has entered the Agricultural Department, and a considerable number of teachers have finished a teachers' training course and gone out to the schools. The number of applicants for the College matriculation showed a great increase on last year, and the proportion of applicants who succeeded in the examination was also far greater than before.

65. Comparative table giving particulars of expenditure on education during the last five years :—

Year.	Total Government expenditure on Education. £	Total Revenue. £	Percentage of total revenue expended on Education	Amount spent by Government on Education per head of population. Cts.
1923 ...	12,937	999,750	1·3	9
1924 ...	17,521	1,239,789	1·4	10
1925 ...	24,595	1,479,284	1·7	16
1926 ...	42,664	1,389,641	3·07	28
1927 ...	48,001	1,292,306	3·7	32

The following table is a summary of the schools, together with the teachers and the pupils attending them. The figures given must be regarded as approximate :—

<i>Intermediate Schools—Boarding Schools.</i>				<i>Protestant.</i>	<i>Roman Catholic.</i>	<i>Total.</i>
No. of Schools ...	...	...	...	17	13	30
No. of European Teachers ...	...	...	...	22	21	43
No. of Native Teachers ...	...	...	...	83	29	112
No. of Scholars (Boys) ...	...	...	...	927	557	1,484
" " (Girls) ...	...	...	...	671	230	901
<i>Normal Schools.</i>						
No. of Schools ...	...	...	...	4	7	11
No. of European Teachers ...	...	...	...	5	13	18
No. of Native Teachers ...	...	...	...	7	6	13
No. of Students (Male) ...	...	...	...	103	131	234
" " (Female) ...	...	...	...	41	98	139
<i>Elementary Vernacular Schools.</i>				<i>Protestant.</i>	<i>Roman Catholic.</i>	<i>Non-Mission. Total.</i>
No. of Schools ...	...	...	...	74	71	9 154
No. of European Teachers ...	...	...	...	5	54	— 59
No. of Native Teachers ...	...	...	...	252	196	22 470
No. of Adults ...	...	...	...	125	151	5 281
No. of Boys ...	...	...	...	5,210	5,748	396 11,354
No. of Girls ...	...	...	...	469	1,299	— 1,768
<i>Sub-Grade Schools.</i>				<i>Protestant.</i>	<i>Roman Catholic.</i>	<i>Total.</i>
No. of Schools ...	...	...	...	2,540	1,927	4,467
No. of European Teachers ...	...	...	...	3	57	60
No. of Native Teachers ...	...	...	...	2,871	2,508	5,379
No. of Adults ...	...	...	...	24,407	8,080	32,487
No. of Boys ...	...	...	...	75,860	26,969	102,829
No. of Girls ...	...	...	...	45,599	52,469	98,068

## X.—LAND AND SURVEY.

66. Following the preliminary reconnaissance made during 1926 with a view to the extension of the trigonometrical survey northwards from the Teso district to the Sudan boundary, which may be described as the northern meridional chain, the work of beaconing

and observing was commenced and ten main stations were occupied and an area of 1,450 square miles was covered.

The "mailo" survey of Buganda, that is, the cadastral survey of estates guaranteed to natives under the Uganda Agreement, 1900, was continued during the year. Estates representing a total of 446 square miles were surveyed, thus increasing the area within which the ownership of all land has been determined, since work was begun in 1904, to 9,825 square miles out of a total estimated area of the Buganda Kingdom amounting to 16,828 square miles. Surveys were also continued in Toro and a total of 316 square miles out of the area of 376 square miles granted by the Toro Agreement have now been surveyed.

The area of Crown Land leased for agricultural and similar purposes was 12,703 acres. No freehold is now granted, but 25 conveyances covering an area of 13,213 acres were executed during the year, all being in satisfaction of long outstanding contracts of sale.

### **Geological Survey.**

67. During the year, 320 square miles were geologically surveyed, the whole of this being preliminary survey, and 709 miles of traverse were completed outside the areas mapped.

68. Negotiations with the Anglo-Persian Oil Company with a view to exploring and prospecting for oil in the Lake Albert area are actively proceeding. No further field work has been done by the Geological Department in this area.

69. Prospecting for tin and other minerals in the Western Province is proceeding more actively than in the previous year. New discoveries of tin have been found in two widely separated areas some 200 miles from the well-known Ankole field, but it is not known whether economic supplies exist or not. The Ankole cassiterite occurrences are eluvial deposits at or near the surface, but there is no reason why the lodes from which the eluvials are derived should not go down, and attempts are being made to strike them in depth by tunnelling. The search for alluvial tin has, for the most part, met with unexpected failure, even traces of tin in the alluvials being very rare. It is significant that the bed-rock in the valleys which cut into anticlinal structures cored by tin-producing granite yields stone tools. The absence of expected leads, the presence of modern gravels in the valleys of flood-like character, taken in conjunction with other evidence from other parts of the Protectorate of more than one pluvial period within human times, point to the hypothesis that the one-time placers which presumably existed have been swept away. There may be, however, a chance of locating tin in the alluvials well down the Kagera River.

70. Apart from the deposits of Karroo age discovered in the Entebbe peninsula, three entirely new areas of Karroo beds have



been located, and it is proposed to survey these with a view to determining possibilities of the occurrences of coal.

71. Seismometer records have been kept throughout the year and more than seventy earthquakes have been registered. The most important and largest were those of 24th January, 7th March, 14th April, 22nd May, 3rd June, 1st, 11th and 22nd July, 5th and 10th August, 24th October, 16th, 21st and 22nd November, 28th December. Many of the shocks registered correspond with earthquakes in other parts of the world. Some of the local shocks, though felt at outstations, were not recorded by the instruments; such disturbances are regarded as due to small local settlements along fault planes.

### **XI.—LABOUR.**

72. The activities of the Labour Department were somewhat curtailed during the year owing principally to the fact that the voluntary flow of labour created in 1925 and 1926 exceeded Government and public requirements, and it was possible to stop recruitment by the officers of the Department in June.

A total of 5,305 labourers was recruited for Government Departments as against 18,112 in the previous year.

73. In January portions of the Railway extension construction in the Eastern Province were given out to private contractors. In July the Provincial Commissioner, Eastern Province, assumed responsibility in regard to all matters connected with recruitment and subsequent supervision of labour engaged on Railway construction in that Province, the Labour Commissioner from then onwards acting as an Inspecting and Advisory Officer.

The monthly average of labour employed on this work was 5,365 at 16s. to 18s. per mensem on a thirty-day ticket, plus rations.

74. Owing to the employment of an adequate European staff and the improvement in accommodation the condition of labour from every point of view has been most satisfactory and the mortality and sick rates have consequently been low. Permanent houses of concrete were built during the year by the Railway authorities at various centres and the health of the labour housed therein has shown very marked improvement.

75. Early in the year the Government control camps on the labour routes were thrown open for use by privately-recruited labour and rations are now issued to such labour on payment by the employers.

76. In August a Commission was appointed to enquire into the conditions under which immigrant labour travels, lives, and is employed in the Protectorate.

**XII.—MISCELLANEOUS.***Legislation.*

77. During the year, sixteen Ordinances were passed. The most important of these were the Crown Lands (Amendment) Ordinance, which enables re-entry upon leased Crown Lands for non-payment of rent; the Aerial Navigation Ordinance, enacted to regulate air-navigation over the Protectorate; the European Officers' Pensions Ordinance, which regulates the grant of pensions, gratuities, and other allowances to European officers on retirement from Uganda, and is identical with the Ordinances on the same subject passed in other East African Dependencies with which Uganda is grouped for pension purposes; the Asiatic Widows' and Orphans' Pension Ordinance, providing for the grant of pensions by means of a contributory scheme to the widows and orphans of deceased Asiatic officials; the King's African Rifles Reserve of Officers Ordinance, which establishes in connexion with the King's African Rifles a Reserve of Officers from among retired officers or ex-officers of the military forces of the Crown who are permanently resident in East Africa; the Kenya and Uganda Railway Ordinance, which enables the High Commissioner of Transport for Kenya and Uganda to manage those steamer and other transport services placed under his control by virtue of the Kenya and Uganda Transport Order in Council, 1925; the Education Ordinance, providing for the development and regulation of native education and for the assistance of Indian education.

**Climate and Meteorology.**

78. The Climate of the Protectorate as a whole, though pleasant, cannot be considered healthy for Europeans. European children as a rule thrive in infancy, but considerable risk is attached to bringing them out when they are over two or three years old, as they are liable to attacks of malaria and resultant anaemia. The health of adults depends mainly on their mode of life and, with care, constitutional health should not be impaired; but even if physical fitness is maintained the altitude and proximity to the Equator combine to produce nervous strain after prolonged residence. Outdoor manual labour is dangerous for Europeans, and on plantations a manager's or owner's duties are for the most part supervisory. With the exceptions mentioned below, the temperature is moderate and varies but slightly throughout the year.

The mean maximum temperature for most districts averages 80° Fahrenheit and the mean minimum 60° Fahrenheit. On the Ruwenzori Range there is extreme cold with perpetual snow, and it is also cold on the higher slopes of Mount Elgon. In the Nile Valley near Lake Albert, on the other hand, the mean maximum temperature is 90° Fahrenheit and the mean minimum 74° Fahrenheit. The favourite localities for European plantations are the Buganda Province (particularly the Mengo and Mubende districts), the Toro

district of the Western Province, and the Bunyoro district of the Northern Province. There are a few estates in Busoga (Eastern Province), but this is not a popular area.

79. Statistics taken at Entebbe give the following results :—

Average rainfall for the last 32 years—59.62 inches.

Average temperature for the last 27 years—maximum, 78.7; minimum 62.8.

Mean daily sunshine for 1927—6 hours 12 minutes.

The rainfall at Entebbe for the year, which was below the average, amounted to 53.73 inches distributed over 124 days. The highest rainfall was recorded at Kalangala, where 64.64 inches were registered, and the lowest at Moroto, where 20.27 inches were registered.

Two main rainy seasons are anticipated annually. The first, or "long" rains, usually begins in March and may continue through June; the second, or "short" rains, begins in September and extends through October and occasionally November; generally speaking, both seasons are experienced throughout the Protectorate. Much of the rain falls during the night or early morning. Violent thunderstorms and heavy showers occur frequently in the daytime, but these are only of local incidence.

### **Veterinary.**

80. During the year rinderpest was a constant source of anxiety on the south-eastern borders of the Protectorate; but serious spread into the rich cattle areas of Bugishu and Budama was prevented by rapid concentration of staff at each outbreak as it occurred on the Kenya-Uganda border, and satisfactory control of the disease was thus achieved. Unfortunately rinderpest appeared in Teso and Lango at the end of the year and 100 miles north of the immunised area. The Veterinary Department had, therefore, once more to concentrate personnel in those districts. The position at the end of the year was grave, as the infected areas are largely famine-stricken, and the difficulties of controlling the disease are increased by the lack of adequate grazing and water. The danger of spread is still further enhanced by the concentration of the cattle of these districts, which number over 500,000, in small areas thus giving a ratio of 1 bovine to 10 acres. Despite the numerous outbreaks, losses have not been heavy, and the Protectorate can show a total increase of 456,142 head of cattle since 1924. The Buganda, Western and Northern Provinces have been kept free from rinderpest. The preparation of 3,500 doses of serum at inoculation camps and without extensive equipment is an important step towards rinderpest eradication. This procedure should prove of especial value in such districts as Karamoja, where a fixed programme of inoculations might be arranged for elimination of the disease.

81. There is a steady decrease in the incidence of pleuro-pneumonia, and the fact that over 6,000 head have been moved to

Buganda from a district which had been in quarantine for ten years and which was heavily infected in 1922, indicates the progress made in eliminating the disease that, in 1921-23, involved the greater part of the Eastern Province.

Minor losses from trypanosomiasis were recorded in Buganda and the Western Province. The experimental treatment of large numbers of bovines has been continued and it is satisfactory to record that in Uganda there is now established a practical drug treatment that has saved a considerable number of native-owned cattle.

Two former tsetse-fly belts have been exhaustively examined. The "fly" appears to have disappeared entirely in one large area, whilst in the other certain original measures have been introduced to prevent further spread of tsetse-fly by human agency.

82. The training of native veterinary assistants by a specially selected officer is showing most satisfactory results, and the use of such assistants by the Veterinary Department is in consequence steadily increasing.

The Stock Farms are proving of value in the collection of necessary data in relation to future stock industrial developments. A useful series of milk analyses in various Provinces has been completed, which will not only assist public health measures but will also aid in the study of genetics.

There was an increase in the value of hides and skins exported during the year, but much remains to be done to improve the quality of these commodities.

83. The laboratory division of the Veterinary Department carried out important work on the problem of transmission of trypanosomiasis and investigation with the use of drugs to facilitate the diagnosis of that disease. Investigations into the use of dips as curative and prophylactic agents were also made. Attention was given to further immunisation work in connexion with fowl typhoid, a disease that is very prevalent in Uganda; and experimental work was undertaken in the production of anti-rinderpest serum.

### **Game.**

84. The Game Department was formed at the end of 1924 primarily with the object of controlling the huge herds of elephants, which find a home in many parts of the Protectorate, and of protecting native cultivation. The results have, unquestionably, been successful.

Although it is estimated that there are nearly 20,000 elephants in Uganda, there still remains ample room for both the elephants and the human population. The toll taken each year due to Government action, hunting by licence-holders and through other agencies, amounts to a total of 900 to 1,000 elephants. But this is more than counterbalanced by the normal annual increase.

85. There is little game in the populated areas, though in outlying districts, in certain well-favoured localities, and in the closed (infected) sleeping sickness areas, there is plenty, and of good variety. Included in the fauna of the Protectorate are such rare and interesting animals as the northern race of the white rhinoceros, the mountain gorilla, the situtunga, and the grotesque whale-headed stork.

86. There are three game reserves: (1) The Bunyoro Game Reserve, which acts principally as an elephant sanctuary and contains a herd of approximately 5,000. It is about 1,130 square miles in extent. (2) The Semliki Game Reserve of 108 square miles, affording protection to a variety of antelopes, buffaloes, and a few small herds of elephants. (3) The Lake George Game Reserve of 123 square miles, which is a seasonal refuge of herds of elephants and buffaloes and protects partially a race of waterbuck carrying exceptionally fine trophies. All closed (infected sleeping sickness) areas automatically fulfil the rôle of game reserves.

87. A new Game Ordinance came into force on 1st October, 1926, under the provisions of which very much wider powers have been given to land-holders and owners in defence of crops or other property.

Licences to hunt, kill or capture game may be obtained at low fees compared with the generous schedule of animals allowed. "Full" game licences valid for twelve months can be issued to residents for £5 and to visitors for £25.\*

Holders of "full" game licences may be granted special licences to kill or capture a first, second, or two elephants respectively on the payment of £10, £20, or £30. Such special licences are valid only for the period of validity of the full game licences under which they are issued.

There are also licences which are valid for a period of fourteen days which cost a resident £2 and a visitor £5; a special licence to shoot one giraffe for £15; and a bird licence valid for 12 months costing 10s., and entitling the holder to kill or capture any of the birds listed in the fifth schedule of the Game Ordinance.

There are certain species of animals, the hunting of which is prohibited throughout the Protectorate. A list of these is given in Part A of the first schedule of the Game Ordinance. Governor's permits, however, may be granted to kill or capture specimens of these protected animals.

Poaching is at a minimum, and the local inhabitants are displaying less inclination to kill such inoffensive creatures as giraffes and ostriches.

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\* The visitor's "full" licence was increased to £50 in April, 1928.

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# NEW HEBRIDES.

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## REPORT FOR THE YEAR 1927.

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### I.—GENERAL.

#### History.

The New Hebrides lie between the 12th and 20th degrees of South latitude, and the 165th and 170th degrees of East longitude, and are of an area of roughly 5,700 square miles. The principal port of the Group and the seat of Government is the township of Vila, on the island of Efate, in the southern part of the Group and about 5 or 6 days' steam from Sydney, New South Wales.

Santo, the largest and one of the northernmost islands of the Group was discovered by Quiros in 1606, who touched at the Bay of St. Phillip and St. James (Big Bay). Under the impression that he had located the long sought Southern Continent he named it "Tierra Australis del Espiritu Santo," and it is recorded that a settlement was established at the River Jordan, but was later abandoned on account of sickness and dissensions with the natives.

Nothing further was heard of the Group until the year 1768, when Cook touched at various points and, in the year 1774, charted and named most of the larger islands.

At about the same period of Cook's discoveries, the French navigator, Bougainville, sailed between the islands of Santo and Malekula, thereby disproving Quiros' theory as to the existence of the great Southern Continent. The strait through which he passed still bears his name.

In 1788 the French Government expedition under La Perouse is supposed to have visited these islands, but came to an untimely end at Vanikoro, in the Santa Cruz Group, a little to the north of the New Hebrides.

The Banks Group, forming part of the Northern New Hebrides, was sighted by Bligh in 1793.

D'Entrecasteau, Dumont, d'Urville, Belcher, Markham and others, are among the early voyagers whose accounts of these islands are of interest.

The New Hebrides for many years was practically a "no man's land" and a favourite hunting ground for recruiting vessels, but, in the year 1887, a Joint Naval Commission was appointed, charged with the protection of the lives and property of the subjects of the two nations—France and England—in the islands. The

Commission was composed of two officers from each of the English and French warships in these waters and was presided over alternately by the British and French Commanders.

In 1895 an Arbitration Court was formed by the colonists, but the Joint Naval Commission pronounced its veto and the Court was dissolved.

In 1902 the first British Resident Commissioner was appointed, the French Government having a short time previously appointed a similar official.

### **General.**

By the Convention of 20th October, 1906, a Condominium was set up with a joint Court composed of British and French Judges and a neutral President; and an executive government consisting, for some purposes, of the British and French representatives in the Group acting in concert. For other purposes, British and French nationals remain subject to the control only of their national authorities. The Convention of 20th October, 1906, has been superseded by a Convention of 6th August, 1914, which was ratified in March, 1922.

The British and French Resident Commissioners are subordinate to the High Commissioner for the Western Pacific and the High Commissioner at Noumea respectively.

A Commission of Inquiry into the position of British settlers in the Group arrived at Vila on 4th April in H.M.S. "Diomedé," and left on 18th April. During the course of the inquiry they visited many places in the Group.

On 17th August the death occurred of His Britannic Majesty's Resident Commissioner, Mr. G. B. Smith-Rewse, who died at the British Residency on Iririki. His loss was much regretted by the whole community.

H.M.A.S. "Adelaide" visited the Group during September.

### **Geography.**

The islands of the New Hebrides, with which are included the Banks and Torres groups, form an incomplete double chain stretching in a north-north-west direction for a length of 550 miles and consist of about 80 islands. Santo is the largest with an area of approximately 1,500 square miles and a coastline of over 200 miles. Of the smaller islands there are about 18, averaging a little over 5 square miles. The larger islands are high (highest point 5,520 feet) and show extensive exposures of volcanic rocks underlying areas of raised coral terraces, which latter reach in some cases an elevation of quite 2,000 feet. The smaller islands are often wholly

volcanic. There are three principal volcanoes in the Group, which are usually active, situated on the islands of Tanna, Lopevi and Ambrym. Santo contains numerous small rivers, but only navigable to minor craft.

The Group has three good harbours. Vila, Efate, the headquarters of the Administration, lies on one of these harbours. It is a small town built on the surrounding hills, which extend to the beach, on which are to be found the principal business houses. The European languages spoken in the Group are English and French. There is no unification of the native language; each island speaks a different tongue and there are many different dialects in the same island. British and French currency is legal tender in the Group, and the British and French systems of weights and measures are in use.

The natives are Melanesians, but in places there is a mixture of Polynesian blood.

## II.—FINANCE.

The year opened with the French currency at francs 123.05 to the £ sterling and closed at 124.02. The highest rate reached during the year was francs 124.10, and the lowest 122.01. At present there is no bank in the New Hebrides. Most of the French firms carry out their banking business with the Banque de l'Indo-Chine in Noumea, New Caledonia, and most of the British firms with banks in Australia.

Under the Anglo-French Protocol each of the two Signatory Powers defrays the expenses of its own National Administration in the Group. The expenses in connection with the joint services, which consist of the Medical Services, Post and Telegraphs, Public Works, Customs, Treasury, Port and Harbour, Joint Court and certain other Courts, Land Registry, etc., are met from funds provided by local taxation. In the event of the revenue thus obtained proving insufficient, the two Signatory Powers would each pay one-half of the deficit. Since 1921 the revenue obtained by local taxation has proved sufficient.

### Revenue and Expenditure.

#### CONDOMINIUM REVENUE

				£
1923	...	...	...	32,766
				<i>Francs.</i>
1924	...	...	...	944,725.08
1925	...	...	...	1,420,714.00
1926	...	...	...	1,777,199.00
1927	...	...	...	3,037,711.00

## CONDOMINIUM EXPENDITURE.

				£
1923	...	...	...	24,900
				<i>Francs.</i>
1924	...	...	...	686,742.80
1925	...	...	...	*2,508,212.00
1926	...	...	...	1,217,599.00
1927	...	...	...	2,220,479.00

The import and export Customs duties and the port and harbour dues and rates of postage were increased during the year under report. In regard to imports, there is an *ad valorem* duty of 12 per cent. on spirits and tobacco, a 20 per cent. *ad valorem* duty on lace, perfumery and other luxuries, while the bulk of the other imports are subject to a 6 per cent. *ad valorem* tax. For further reference to import duties attention is invited to Joint Regulation No. 2 of 1927.

The export duty is 1 per cent. *ad valorem* with the exception of that on turtle shell which is 5 per cent. *ad valorem* (Joint Regulation No. 3 of 1927).

## EXPENDITURE ON SERVICES ENTIRELY BRITISH.

				£
1923-24	...	..	...	12,150
1924-25	...	...	...	13,759
1925-26	...	...	...	20,248†
1926-27	...	...	...	15,693

The above expenditure is defrayed from funds provided by Parliament on Civil Estimates, Vote for Colonial Services, Class V, 2. There are certain miscellaneous fees of Court, etc., and other casual receipts totalling a few hundred pounds each year, which are eventually paid to the Exchequer as Extra Receipts. The sum voted for British Services includes, among other things, the personal emoluments of the British Resident Commissioner and Staff, Police Force, the District Agents, and the upkeep of the Government yacht.

## III.—PRODUCTION AND NATURAL RESOURCES.

Agricultural development of the Group during the year under review has continued. Although no extensive areas of new country have been opened up, good progress has been made.

Of the produce exported, copra continues to hold pride of place, and an increase in this commodity of about 1,800 tons will be noticed over last year's figures. With more plantations coming into bearing each year, a yearly increase in production can be anticipated.

The greater part of the copra produced in the New Hebrides is grown on European plantations. Of the total shown perhaps

\* NOTE.—A large part of this total was due to a transfer of funds in accordance with the New Hebrides Joint Financial Regulation No. 3 of 1925.

† Exceptional items were included.

2,500 tons may be attributed to purely native sources—mainly from the islands of Tanna and Aoba.

Practically the whole of the copra is exported to Europe.

Cocoa, cotton and coffee, in order of precedence, are the next most important items of agricultural enterprise in the Group. Cocoa continues to be much favoured by settlers, and additional areas have been planted up.

Cotton production remains practically stationary : owing to the comparatively low prices realised in recent years many settlers have ceased to cultivate it while, for the same reason, native production has practically ceased.

The production of coffee and cocoa is entirely in French hands. A certain amount of cotton is grown by British settlers, but in the main their attention is devoted to copra.

No progress has been made in the cultivation of coffee ; the area under cultivation remains about the same, but the export has considerably decreased, in spite of the fact that good prices have been realised. This product is not particularly favoured by planters in the Group—possibly on account of the extra work and machinery required in its preparation when compared with the comparatively simple preparation of cocoa for the market.

The four cotton-ginning plants established in the Group have dealt with the bulk of the cotton grown. A few hundred tons have been sent to Noumea, New Caledonia, for ginning, but the tendency is to get the ginning done locally if possible, owing to the extra costs involved carrying out this operation in Noumea.

The bulk of the cotton produced in the New Hebrides is exported to France.

Certain important properties have passed into French hands at substantial figures, the purchasers being two newly-formed French companies operating on the islands of Santo and Efate.

The number of British settlers in the Group has decreased, owing to disposal of their properties, whereas a slight increase in the French total is observed.

The British share of the export trade would amount to about 25 per cent. of the total.

From the following figures it will be seen that the agricultural development of the Group is increasing and the general position at the end of 1927 shows a decided improvement over that of the previous year.

The fertility of the soil in almost every island of the Group enables most tropical agricultural products to be grown very easily. The almost entire absence of diseases and pests common to other tropical countries is an important factor in ensuring to the planter the maximum results. The rainfall is abundant, and hurricanes are of rare occurrence and are usually confined to a small area.



COMPARATIVE TABLE IN TONS AND STERLING.

<i>Produce.</i>	1923.		1924.		1925.		1926.		1927.		
	<i>Tons.</i>	<i>Value.</i> £	<i>Tons.</i>	<i>Value.</i> £	<i>Tons.</i>	<i>Value.</i> £	<i>Tons.</i>	<i>Value.</i> £	<i>Tons.</i>	<i>Value.</i> £	
Copra ...	...	6,302	113,428	6,792	125,652	7,371	162,154	8,382	184,318	10,204	204,090
Cocoa ...	...	1,062	42,484	1,517	60,716	1,495	59,808	1,949	87,731	2,344	140,697
Cotton ...	...	1,287	32,185	1,420	46,068	*1,015	56,294	*1,420	44,556	†501	40,170
Coffee ...	...	366	14,666	281	7,110	287	10,111	274	21,890	123	4,842
Trochas ...	...	—	—	—	—	112	8,073	85	4,686	86	4,299
Maize ...	...	247	1,977	307	1,844	194	1,358	207	1,659	118	949
Sandalwood ...	...	50	1,492	84	1,038	22	554	57	1,435	23	384
Wool ...	...	30	6,000	33	10,805	23	6,129	32	7,222	5	601
Cotton seed ...	...	—	—	—	—	316	541	987	1,467	880	880
Miscellaneous ...	...	—	5,709	347	7,857	248	2,379	304	19,265	63	1,116
Totals ...	...	9,844	£217,941	10,781	£261,090	11 083	£307,401	13,697	£374,229	14,347	£398,028

\* Mixed.

† Ginned.

## IV.—TRADE AND ECONOMICS.

The total value of goods of all kinds imported into the New Hebrides during the year under review amounted to £307,939, or 38,184,562 francs, an increase on a sterling basis over the previous year's operations of £110,099, or 7,727,157 francs, on a franc basis.

## IMPORT VALUES.

<i>Year.</i>			<i>British Currency.</i>	<i>French Currency.</i>	<i>Remarks.</i>
			£	Francs.	
1923	...	...	85,300	6,462,721	@ 77 francs = £
1924	...	...	92,201	7,929,327	@ 86 " = £
1925	...	...	217,863	22,004,232	@ 101 " = £
1926	...	...	197,840	30,457,405	@ 154 " = £
1927	...	...	307,939	38,184,562	@ 124 " = £

The British share of the import trade is approximately 25 per cent. of the whole.

A fair amount of trade is done with the port of Sydney, New South Wales, mostly in necessities of life such as flour, sugar, tinned meats, etc., while spirits, building material and soft goods form an important part. The balance of the imports come mostly from France.

The principal importing firms are : (British) Messrs. Burns Philp (South Sea) Co., Ltd., Messrs. Gubbay Bros., of Vila. (French) Les Comptoirs Français des Nouvelles-Hebrides, Société de Béchade, Vila and Santo, La Compagnie Franco-Hebridaise, Vila and Santo, and Hagen Bros., Epi.

There are four small trading steamers employed in the inter-insular trade, belonging to commercial firms in the Group. Each of these steamers is furnished with a well stocked trade room, where most of the settlers' requirements can be met. Produce (copra, cotton, cocoa, coffee) bought from the settlers by these vessels is usually carried no farther than Vila, and then transhipped into the large cargo boats of the Messageries Maritimes.

There is no great difference in the prices charged by the different firms for goods; nor does the price offered for the various items of produce vary to any great extent, as these vessels are all equipped with wireless telegraphy and are enabled to keep in close touch with the markets.

Competition is naturally very keen, but it is not thought that British trade suffers thereby to any appreciable extent.

Some few years ago the bulk of the New Hebrides trade was confined to Australia, but since the advent of the Messageries Maritimes cargo boats, enabling the settlers and exporters of produce to ship direct to Europe, trade has gradually been diverted from Australia in favour of cheaper freights and direct communication with Europe.

**Wages and Cost of Living.**

The cost of living during 1927 remains approximately the same as in the preceding year's report. The position in Vila does not improve, and fresh vegetables are almost unprocurable. The supply of fresh meat is inadequate for the needs of the European population and the same applies to eggs and poultry, the prices of which remain abnormally high.

The comparative stability of the franc has steadied the local market, but the demand for local produce and the inadequacy of the supply has caused the dealer to maintain high prices. Practically all perishable commodities are imported from Australia. Casual native labour commands 6s. per day and food. Domestic servants are difficult to obtain and are usually sought in other islands where competitive conditions are not so great. For untrained female domestics 25s. to 30s. per month and food is an average wage, and 30s. to 40s. in the case of a male.

Appended below is a table giving the average prices for articles of daily consumption :—

Sugar	...	...	4d. per lb.
Tea	...	...	3s. 6d. per lb.
Butter	...	...	2s. 9d. per lb.
Coffee	...	...	2s. 3d. per lb.
Eggs	...	...	4s. 0d. per dozen
Flour	...	...	18s. 6d. per bag of 50 lb.
Potatoes	...	...	18s. 6d. per sack of 56 lb.
Tinned meat	...	...	1s. 6d. to 2s. per tin.

**V.—COMMUNICATIONS.****Shipping.**

Vila is at present the only Port of Entry in the Group. The amount of tonnage entered and cleared from the Group for the year under report totalled 189,500 tons, which on analysis gives the following result :—

**ENTERED.**

			<i>Tons.</i>
British	..	...	13,882 (19 vessels.)
French	...	...	80,490 (46 vessels.)
Other	...	...	641 ( 1 Chinese.)

Total 95,013

**CLEARED.**

			<i>Tons.</i>
British	...	...	13,524 (18 vessels.)
French	...	...	80,322 (40 vessels.)
Other	..	...	641 ( 1 Chinese.)

Total 94,487

The Messageries Maritimes line of steamers run a two-monthly service of "cargo mixte" from Vila to Marseilles via Tahiti, Panama and Martinique.

The S.S. "Makambo" (Burns Philp Line) and the S.S. "Duplex" (Messageries Maritimes) maintain communication with Australia—the former via Norfolk Island and Lord Howe Island, and the latter via Noumea (New Caledonia).

Inter-island communication is maintained by the S.S. "Malinoa" (Burns Philp South Sea Co., Ltd.), "Saint Andre" and "Saint Michel" (Messrs. Ballande & Co.) and the S.S. "Neo-Hébridais" (Messrs. de Béchade). There are also numerous small sailing and auxiliary craft that ply between the islands.

Messrs. Ballande also run three large steamers (Vila-Marseilles) to ship their own merchandise as and when necessary.

### **Roads.**

Internal communications in the Group are in an undeveloped state. In several of the islands roads have been constructed near the coast for the purpose of bringing merchandise down to the ships. Such roads, which are of a primitive nature, have been made by local traders, plantation owners and missionaries.

At the capital, Vila, better conditions obtain. In the town itself there are a number of fairly good roads, but they do not extend, except in a few cases, beyond the limits of the town. Efforts are being made to construct roads to the outlying districts and to make into roads the present tracts that are constantly used by planters situated at a distance from Vila, for commercial purposes. All road making at present is carried out by contract with local planters. Of late, the importation of motor-cars and commercial motor vehicles into the different islands has added considerably to the importance of the work of road construction. On Efate there are thirty motor vehicles and the necessity of providing more adequate highways is engaging the attention of the Administration.

### **Railways.**

There are no railways proper in the Group. A small two-foot rail track runs from Vila to the outskirts of the village of Mele and is used for various commercial purposes.

### **Posts.**

The volume of correspondence handled by the Post Office continues to increase. Appended below is an analysis of the Post Office returns for the year under report. Mail communication is maintained by the S.S. "Makambo" and S.S. "Duplex" mentioned elsewhere—these vessels being subsidised by the

Commonwealth Government and French Government respectively. The regular sailings of the large Messageries Maritimes vessels are also subsidised by the French Government. Owing to the large number of Tonkinese labourers imported into the Group the handling of correspondence from and to French Indo-China has considerably increased.

The Condominium has a special postage stamp, suitably designed to represent the dual control and inscribed with British and French currency values at par of exchange. They may be purchased in either currency at the official rate of exchange. There are two mail services from Australia every month.

	<i>From, or to, British territory.</i>		<i>From, or to, French territory.</i>		<i>Other places.</i>		<i>Total.</i>
	<i>Received.</i>	<i>Des- patched.</i>	<i>Received.</i>	<i>Des- patched.</i>	<i>Re- ceived.</i>	<i>Des- patched.</i>	
<b>Letters ...</b>	24,000	18,000	62,000	40,000	2,500	1,300	147,800
<b>Other articles</b>	48,000	2,500	28,000	5,000	—	—	83,500
<b>Registered articles</b>	1,200	1,000	4,000	3,500	300	100	10,100
<b>Totals... ..</b>	<b>73,200</b>	<b>21,500</b>	<b>94,000</b>	<b>48,500</b>	<b>2,800</b>	<b>1,400</b>	<b>241,400</b>

### **Radiotelegraph.**

There is no cable communication with the Group but a Government radiotelegraph station was established at Vila in 1916. This station is worked by two operators—one British and one French. The total number of messages handled by the station during 1927 was 8,808. Of this number, 4,428 were despatched and 4,380 received. Of those sent, 806 were on Government account, and of those received 720.

The cost of the station during 1927 amounted to francs 168,884, and the receipts on account of traffic, francs 72,745. Of this sum francs 41,314 was payable to other stations as their share of the coastal charges.

The bulk of the traffic is with Noumea—the majority of the messages for Australia passing through that station. There is a daily service with Suva (Fiji) and communication is also maintained with other stations in the Pacific groups.

### **Telephones.**

There are fifty telephone installations in and around Vila, operated by one central exchange. The system is in process of being extended to the outlying districts. Owing to weather conditions during the hurricane season it is a difficult matter to keep

the system in a state of efficiency. There is no telephone communication in the other islands.

## VI.—JUSTICE, POLICE AND PRISONS.

### **Justice.**

The Joint Court, which consists of a British and French judge, presided over by a judge of neutral nationality, is the principal Condominium instrument for the dispensation of justice in the Group. In 1927 the Joint Court delivered 44 judgments, the majority of these being for the illegal sale of alcohol to natives in contravention of Article 59 of the Protocol. There were no cases of serious crime during the year under report.

Besides the Joint Court, the Protocol provides for the institution of Courts of First Instance in the various Administrative Districts, presided over by the Condominium District Agents. These Courts have jurisdiction over infractions of the Protocol (or of Joint Regulations made thereunder) except those concerning the recruitment and engagement of native labour. Unfortunately, various difficulties have manifested themselves in the constitution of these Courts and they have not yet been established.

The Protocol further provides for the institution of Native Courts and a Code of Native Law. The latter is about to be promulgated and the year 1928 should see the Native Courts functioning in some areas.

### **Police.**

The Group is policed by two separate forces of armed Native Constabulary, with headquarters at Vila, each in charge of a Commandant under the orders of the respective Resident Commissioner.

The British force is composed of natives recruited from the islands of the New Hebrides, and the French force partly of New Hebrideans and Loyalty Islanders.

The duties of the native constabulary consist in the maintenance of law and order among the native population of the civilized areas, general police and patrol work, the repression of native disorders, and the guarding of native prisoners.

Each of the District Agents is provided with a small detachment of police from Headquarters, to assist them in the execution of their duties.

Both the British and French Commandants, in addition to their duties as police officers to the Condominium, also act as police officers in so far as their own nationals are concerned, and are charged with the conduct of police cases before their respective national Courts.

The whole of the cost of maintenance of the two forces is defrayed by their respective national Governments; except when acting jointly, when the expenses are met from Condominium Government funds.

### **Prisons.**

There are two national prisons situated in the town of Vila, in which natives and whites under sentence of imprisonment are confined. The cost of maintenance of prisoners sentenced by the national tribunals is met from national funds of the Government concerned, and that of natives sentenced by the Resident Commissioners and the various mixed Courts, from Condominium funds.

There is no Condominium prison staff. Each Commandant of Police acts as prison keeper and is responsible for the supervision of the prisoners placed in his charge. He is assisted by police constables who act as warders.

Native prisoners are employed on works of general utility, such as the making and cleaning of roads, weeding Government paddocks, transport of material for various Government buildings, etc.

The daily average of prisoners confined in the British prison amounted to 11.5. Two deaths occurred during the period under report, and the health of prisoners on the whole was good.

## **VII.—PUBLIC WORKS.**

Owing to the increasing trade of the Group and the work in connection with titles to land, to which reference is made elsewhere, the Condominium personnel has increased, and this has made necessary the construction of new houses and the importation of quantities of building material. Most of the work in connection with the erection of buildings is carried out by local contract. The amount spent on Public Works—Annually Recurrent and Extraordinary—for the year under report amounted to approximately 700,000 francs (£5,646). Of this sum 200,000 francs (£1,612) was spent on the improvement and making of roads and bridges and the balance on the repairs to present buildings and the erection of new works.

There is difficulty in procuring local labour, both skilled and unskilled.

## **VIII.—PUBLIC HEALTH.**

From the report of the Condominium Medical Officer, which is given at the end of this section, the health of the European and native population has been satisfactory for the period under report. A mild epidemic of measles occurred in the Group during the latter half of the year, but it was not of a serious nature and there were few deaths.

**Hospitals.**

There are two well-equipped hospitals at Vila ; the John G. Paton Memorial Hospital, administered by the Presbyterian Mission of New South Wales, and the French Government hospital. Statistics of the work performed by these institutions are given below. The Paton Memorial Hospital receives a subsidy from the British Government. Both hospitals are in charge of qualified medical practitioners.

<i>Cases Treated.</i>	<i>British Hospital.</i>		<i>French Hospital.</i>		<i>Total.</i>
	<i>Europeans.</i>	<i>Natives and Asiatics.</i>	<i>Europeans.</i>	<i>Natives and Asiatics.</i>	
"In" Patients ...	30	286	238	2,892	3,446
"Out" Patients ...	32	675	2,731	4,627	8,065
<b>Totals ...</b>	<b>62</b>	<b>961</b>	<b>2,969</b>	<b>7,519</b>	<b>11,511</b>
<b>Deaths ...</b>	<b>1</b>	<b>19</b>	<b>7</b>	<b>67</b>	<b>94</b>

There is a small French Government hospital on Santo, and a hospital on Tanna, run also by the Presbyterian Mission and subsidised by the British Government. These are both in charge of qualified medical men and have done excellent work. The Condominium Government have a dressing station on Malekula in charge of a Fijian Native Medical Practitioner, and natives in the surrounding district receive medical attention. There is also a well-equipped private hospital on Santo, run by the Agricultural Society and in charge of a European doctor, and another small hospital on Malekula also run by private enterprise.

**Diseases.**

Malaria is widespread and epidemic from November to May. Beyond malaria and occasional cases of blackwater fever there are no other diseases to which the European is specially liable except dysentery (amoebic), which is endemic throughout the year and epidemic during the rainy season.

The New Hebrides native suffers mostly from yaws, malaria, dysentery and ankylostomiasis (hookworm). Good work has been carried out in the Group in the treatment of yaws by arsenical preparations by the various institutions and by missionaries and others. Various skin diseases occur among the natives from time to time and occasional cases of tetanus. Pulmonary disease also frequently occurs.



### **Sanitation.**

Much requires to be done under this head to effect any decided improvement. A commencement has been made in Vila by the clearing of bush and the filling in of mosquito breeding places. A substantial sum is being voted for 1928 to carry on this work. The water supply of Vila is rain water collected in tanks by occupants of houses. During the rainy season when dysentery is epidemic it is advisable to treat the water chemically.

### **Climate.**

The climate of the New Hebrides is classed as unhealthy, but it compares favourably with most tropical places. The year is divided into two marked seasons, the wet season commencing in November and terminating in April, and the dry season from May to October. The New Hebrides being in the hurricane belt is liable to hurricanes during the wet season. The mean temperature of Efate is 77° F., ranging from 63° F. to 89° F. The islands south of Efate are considerably cooler and those to the north about 7° warmer.

#### **REPORT OF CONDOMINIUM MEDICAL OFFICER FOR 1927.**

The year 1927 has been very wet. Public health generally maintained a fairly satisfactory level. There was an outbreak of measles in Vila. No deaths occurred among the European children, but a fairly heavy toll was taken of the natives owing to lack of care in the early stages of the disease.

Whooping-cough and chicken-pox, as well as influenza, have also prevailed in the Group. A pulmonary form of influenza caused many deaths among the natives—chiefly in the outlying islands.

### **IX.—EDUCATION.**

There are three primary schools in the town of Vila, all French; (1) a girls' school, under the supervision of the Sisters of the Sacred Heart Mission; (2) a school for boys, in charge of the Marist Mission, both entirely supported from Mission funds. School fees are purely nominal and the education is not of a very high order. The third school is owned and controlled by the French Government, and is classed as an infants' school. Attendance is not confined to whites but all colours and nationalities are freely admitted. Outside of the town of Vila no facilities whatever exist for the education of white children, who are usually sent to Noumea or Sydney for this purpose.

The various Missions in the Group include elementary education in their curriculum, and good progress has been made in this direction among the native population. On the island of Tangoa, Santo, an institution, for the purpose of training natives to become

mission teachers is supported by the Presbyterian Mission, and a similar institution is also run by the Melanesian Mission on the island of Aoba.

There are no schools controlled or supported by the Condominium Government.

#### X.—LANDS AND SURVEY.

The whole of the land in the New Hebrides now occupied or claimed by white settlers and others was originally acquired from native owners. Ownership at the present day is based on those deeds, and various transfers of the same, together with occupation and improvements. No indefeasible titles exist, but the Joint Court, which is also a Land Court, will be in a position to commence this important work during the forthcoming year. There are approximately 1,000 claims to ownership, representing an approximate area of 2,000,000 acres.

To facilitate the work of the Joint Court, in the granting of titles, trigonometrical surveys of certain portions of the Group have been made, and this work is being proceeded with by the Lands Department. A staff of surveyors is attached to the Joint Court.

#### XI.—LABOUR.

The employment of native labourers under contract in the New Hebrides is regulated by the provisions of the Anglo-French Protocol of 1914. In addition, British settlers are bound by King's Labour Regulations Nos. 1 of 1913 and 10 of 1926. These instruments provide adequate safeguards both for employer and employee.

As the agricultural development of the Group progressed, the supply of labour from local sources became increasingly difficult to obtain and was inadequate to meet the demand. Settlers experienced great difficulty in extending their cultivations and in harvesting their crops. The difficulty, in so far as French settlers were concerned, was solved by the importation of Indo-Chinese coolies under the auspices of the French Government in the year 1921. The experiment was a success, and the movement has continued ever since. There are at the present moment in the Group some 4,500 Tonkinese coolies under contract to French settlers.

British settlers are still dependent on local sources for the working of their plantations, but the supply is not equal to their needs.

There are many causes to be assigned for the native's disinclination for work, but chief among them may be cited the progress of civilisation within the Group, which has brought within the reach of the native such luxuries as he craves for and which are now obtainable with a minimum of effort on his part. A number of

the natives to-day own coconut and cotton plantations of small dimensions, the produce of which, disposed of to the nearest trader, obviates any necessity for leaving home for the life of a plantation labourer in the service of a white man.

## XII.—POPULATION.

### NON-NATIVE.

A statement is appended giving details of the non-native population for the year under report:—

<i>Description.</i>	<i>British.</i>			<i>French.</i>		
	<i>Adult Males.</i>	<i>Females and Children.</i>	<i>Total.</i>	<i>Adult Males.</i>	<i>Females and Children.</i>	<i>Total.</i>
Nationals ... ..	121	79	200	422	298	720
Foreigners opted under Protocol ...	11	12	23	14	—	14
Asiatics opted under Protocol ... ..	15	—	15	40	—	40
Protected subjects and citizens ...	1	1	2	2,780*	1,720	4,500
				25†	29	54
<b>Totals ...</b>	<b>148</b>	<b>92</b>	<b>240</b>	<b>3,281</b>	<b>2,047</b>	<b>5,328</b>

\* Tonkinese coolies under indenture.

† Javanese coolies under indenture.

Compared with the figures for the previous year the British population shows a slight decrease, whereas that of the French shows an increase of forty nationals, and 885 others principally Indo-Chinese coolies.

### NATIVE.

No reliable figures are available concerning the total of the native population. Various estimates have been made from time to time ranging from 60,000 to 10,000, but it is not thought that a census, were such practicable, would reveal any greater number than 50,000. The islands most thickly populated, in order of importance, are Malekula, Pentecost, Santo, Tanna, Aoba, Ambrym, Epi and Efate.

There is no doubt that in general the population is on the decline, although on the islands of Tanna and Tongoa the numbers have remained practically stationary for the past few years.

It is significant that the inhabitants of the two islands on which the population at least is not decreasing are perhaps the keenest traders and wealthiest natives of the whole Group.

## XIII.—METEOROLOGICAL.

For the period under report there was only one atmospheric disturbance in the Group. This occurred between the 27th and 30th of December, when a violent storm swept over Efate and some damage was done to plantations and to small craft in Vila harbour. The storm did not attain the velocity of a hurricane. A statement is appended below showing the rainfall at four stations in the Group for the years 1923 to 1927, and the preceding mean quinquennial rainfall.

Year.				<i>Port Vila</i> ( <i>Efate</i> ). 17.44 S. 168.18 E.	<i>Dillons Bay</i> ( <i>Erromanga</i> ). 18.47 S. 168.58 E.	<i>Hog Harbour</i> ( <i>East Santo</i> ). 15.05 S. 167.67 E.	<i>Port Paterson</i> ( <i>Vanua Lava</i> , <i>Banks Is.</i> ). 13.50 S. 167.34 E.
1923	...	...	...	69.79	64.32	137.09	157.86
1924	...	...	...	77.84	47.17	135.78	139.88
1925	...	...	...	74.56	61.25	127.44	128.44
1926	...	...	...	73.06	62.34	133.34	137.50
1927	...	...	...	74.26	59.77	134.41	143.42
Mean Annual for five years				73.90	58.97	133.61	141.42
Mean, previous five years...				78.27	68.07	120.03	160.16

G. A. JOY,

*Acting Resident Commissioner.*

BRITISH RESIDENCY,

VILA, NEW HEBRIDES,

23rd March, 1928.

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**1927**

**BY**  
**E. E. F. PRETTY**  
*British Resident, Brunei*

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# ANNUAL REPORT ON THE STATE OF BRUNEI FOR THE YEAR 1927

## Prefatory Note

The State of Brunei is situated between British North Borneo and Sarawak, lying between  $115^{\circ}$  and  $116^{\circ}$  E. long., and touching the sea at Brunei Bay in which lies the Island of Labuan.

It is 770 nautical miles distant from Singapore.

A State named Puni, 45 days' sail from Java, is mentioned several times in the annals of the Sung dynasty, which ruled over Southern China from about 960 to 1,280 A.D., and it is practically certain that this is Brunei. In the 13th and 14th centuries Brunei owed allegiance alternately to Mejapahit and Malacca. The Sultanate rose to great power in the early years of the 16th century in the reign of Nakoda Ragam and its authority extended not only over the Northern part of the Island of Borneo but over the Sulu Islands and part of the Philippines.

The first European account of Brunei is that of Pigafetta, who visited it in 1521, and was greatly impressed by the splendour of the Court and the size of the town, the population of which he estimated at 25,000 families.

Towards the end of the 16th century the power of Brunei began to decline and by the middle of the 19th century it had fallen hopelessly into decay. Sarawak was ceded to Sir JAMES BROOKE in 1841, and concessions were made to the British North Borneo Company and to the Sarawak Government till Brunei has now been reduced to an area of about 2,500 square miles containing a population of some 40,000 souls.

In 1888, the Sultan agreed that Great Britain should control his foreign relations and in 1905, under a further agreement a British Resident was appointed to advise and assist in the administration of the State.

## I.—Financial.

1. The total Revenue for 1927 amounted to \$402,134 and the total Expenditure to \$426,981 giving a deficit for the year of \$24,847.

The Estimated and actual totals are compared in the following table:—

		<i>Estimated</i>	<i>Actual</i>	<i>Difference</i>
		\$	\$	\$
Revenue	...	354,925	402,134	+ 47,209
Expenditure	...	336,539	426,981	+ 90,442
<b>Difference</b>	...	+ 18,386	— 24,847	



## REVENUE.

2. The Revenue exceeded that for 1926 (the highest previously recorded) by \$34,790, the principle increases being under the headings of Land Revenue and Government Monopolies. For the first time for many years Customs Revenue showed a decline rather than an advance.

## EXPENDITURE.

3. The Expenditure was \$129,000 more than in 1926, and this was almost entirely due to Special Services on Public Works which included a reinforced concrete bridge costing nearly \$80,000.

Provision for this had not been made in the Estimates for the year.

4. The following table shows the State's Revenue and Expenditure each year since it came under British protection:—

		<i>Revenue.</i>	<i>Expenditure.</i>
		\$	\$
1907	...	51,777	93,334
1908	...	43,539	75,738
1909	...	54,562	76,948
1910	...	77,051	73,513
1911	...	109,430	79,318
1912	...	140,847	122,762
1913	...	165,082	138,665
1914	...	126,647	163,352
1915	...	118,972	114,518
1916	...	127,615	113,317
1917	...	126,301	106,011
1918	...	125,726	122,958
1919	...	162,020	138,844
1920	...	201,250	223,690
1921	...	161,520	197,469
1922	...	204,504	188,250
1923	...	221,767	189,208
1924	...	257,474	247,614
1925	...	315,261	245,286
1926	...	367,344	297,894
1927	...	402,134	426,981

## ASSETS AND LIABILITIES.

5. The surplus of Assets over Liabilities at the end of the year amounted to \$209,988.

## PUBLIC DEBT.

6. The total amount of loans outstanding at the end of 1927 was \$419,000.

As arrangements have been made for their liquidation these loans are not shown in the Statement of Assets and Liabilities.

7. The following are shown in Appendices:—

Appendix A.—Abstract of Revenue 1925, 1926 and 1927.

„ B.—Abstract of Expenditure 1925, 1926 and 1927. I

„ C.—Loan Accounts.

„ D.—Statement of Assets and Liabilities 1926 and 1927.

## II.—Trade.

8. The value of the chief imports and exports was approximately \$2,862,218 as against \$3,276,573 in 1926. The decline is more than accounted for by the lower prices prevailing during the year for plantation rubber.

## EXPORTS.

9. The most notable increases were under the headings of pigs and kajangs. There is a considerable pig-breeding industry on the islands in Brunei Bay and these are chiefly exported to Miri in Sarawak.

There were small increases in the export of cutch, plantation rubber and sago flour.

## IMPORTS.

10. The chief increases were in rice, flour, sugar and petroleum, but there was a marked decline in the import of dyed cotton goods, sarongs and machinery.

11. The following tables show the principal exports and imports in 1926 and 1927.

## EXPORTS.

Name of Article	—	Quantity		Value	
		1926	1927	1926	1927
				\$	\$
<i>Food, Animals and Drinks—</i>					
Cattle ... ..	head	259	145	12,573	8,708
Pigs ... ..	"	150	379	5,598	18,973
Poultry ... ..	"	408	440	276	306
Dried Prawns ...	pikuls	1,020	980	52,763	54,179
Dried Fish ... ..	"	67	34	1,584	492
Sago Flour ... ..	"	1,686	1,753	8,152	8,950
Copra ... ..	"	No return	16	No return	159
<i>Raw Materials—</i>					
Raw Sago ... ..	bayongs	66	178	152	343
Cutch ... ..	tons	1,892	2,101	189,200	202,840
Forest Produce ...	...	...	...	6,740	26,546
Plantation rubber ...	lbs.	1,457,772	1,571,522	1,032,055	892,627
Jelutong rubber ...	pikuls	17,211	16,825	295,978	177,029
Hide and Horns ...	"	307	329	4,440	4,308
Kajang ... ..	bundles	4,622	6,228	3,573	4,882
Marine Produce ...	...	...	...	2,129	1,415
Sarongs ... ..	pieces	1,710	1,312	9,905	9,626
Brassware ... ..	pikuls	117	135	14,764	16,008
Silverware ... ..	...	...	...	6,542	11,182
Coal ... ..	tons	...	52	...	624
Other manufactured articles ...	...	...	...	4,624	4,506
TOTAL ... ..	...	...	...	1,651,048	1,443,703

## IMPORTS.

Name of Article	—	Quantity		Value	
		1926	1927	1926	1927
				\$	\$
<i>Food and Drinks—</i>					
Rice ... ..	pikuls	34,268	39,730	273,649	298,812
Other grains ... ..	„	2,025	2,545	10,877	12,297
Milk ... ..	cases	1,277	1,633	19,432	21,276
Salt ... ..	pikuls	2,132	2,047	4,038	4,268
Sugar ... ..	„	6,341	7,476	60,506	67,107
Tobacco ... ..	lbs.	96,963	87,528	119,445	111,763
Provisions ... ..	...	...	...	123,488	113,818
Flour ... ..	sacks	6,172	8,805	22,988	32,249
Coconut oil ... ..	tins	6,201	3,306	17,727	21,521
Coffee ... ..	pikuls	328	407	16,247	17,349
Spirit ... ..	gallons	2,269	2,948	14,732	17,029
Arrack .. ..	„	338	130	1,673	486
<i>Raw Materials—</i>					
Petroleum ... ..	gallons	71,579	72,532	45,206	50,336
Motor Vehicles ... ..	...	...	...	No return	5,796
Timber ... ..	...	...	...	8,628	5,388
Dyed cotton goods ... ..	...	...	...	116,627	80,545
Yarn and thread ... ..	...	...	...	25,487	20,793
Sarongs ... ..	...	...	...	44,861	30,941
Machinery ... ..	...	...	...	266,071	204,502
Chandu ... ..	tahils	12,520	11,520	28,652	24,326
Matches .. ..	tins	921	877	5,264	5,464
Other manufactured articles ... ..	...	...	...	209,311	219,006
Coins and bullion ... ..	...	...	...	190,626	53,443
TOTAL ... ..	...	...	...	1,625,535	1,418,515

12. A comparative return showing the value of the chief exports and imports for the years 1923-1927 is given in Appendices E and F.

A return showing the distribution of trade by Districts is given in Appendix G.

### III.—Customs.

13. The receipts from Customs duties were \$166,612 as compared with \$177,472 in 1926.

14. The collections in each district were as follows:—

District	Export Duties		Import Duties	
	1926	1927	1926	1927
	\$	\$	\$	\$
Brunei ... ..	32,205	37,827	51,250	50,303
Belaït ... ..	18,479	15,663	21,500	16,585
Tutong ... ..	14,517	8,361	8,741	6,116
Temburong ... ..	19,820	19,363	6,287	7,937
Muara ... ..	1,616	1,720	3,038	2,737
<b>TOTAL ...</b>	<b>86,637</b>	<b>82,934</b>	<b>90,826</b>	<b>83,678</b>

15. The following new or amended duties were imposed during the year:—

#### *Export—*

Swine, per head ... .. \$6  
 Copra ... .. 2½% ad valorem.

#### *Import—*

Nil.

### MONOPOLIES.

16. The revenue from the sale of Chandu amounted to \$83,304 as compared with \$73,467 in 1926.

This increase is entirely due to the continued influx of Chinese into the State.

17. The sale of Chandu is controlled entirely by the Government.

Eight hundred and seventy tahils of chandu dross were re-purchased from consumers at a cost of \$3,554.

## IV.—Industries and Agriculture.

### A.—CUTCH.

18. The Island Trading Company Limited exported 2,101 tons of bark extract valued at \$202,840 as compared with 1,892 tons valued at \$189,200 in 1926.

19. In the manufacture of this amount no less than 160,000 pikuls of firewood were consumed.

### B.—OIL.

20. The British Malayan Petroleum Company Limited continued its operations in the Tutong and Belait Districts and it is pleasing to record that towards the end of the year indications of a very favourable nature were discovered along the seashore between the Tutong and Belait Rivers.

21. It is early to prophesy as yet but high hopes are entertained that one day there will be a big oilfield here.

22. This discovery has involved a considerable increase in the Staff employed in Brunei and at the end of the year the Company had 20 Europeans in charge of its operations.

A village has also sprung up at Kuala Belait.

23. In the principal area of their operations, Labi, their efforts again met with no success, though new wells were sunk and old ones deepened. Two of these have now reached a depth of over 3,000 feet.

### C.—PLANTATION RUBBER.

24. Approximately 700 tons of plantation rubber were exported, but the average price for the year once again showed a decline.

25. It is disappointing to see how the planting of rubber has obsessed the natives to the exclusion of every other form of cultivation except their annual crop of rice.

26. During the year all the European-owned rubber Estates made considerable additions to their planted areas.

### D.—RICE.

27. The rice crop was a poor one and totalled approximately 300,000 gantangs. A study of the returns shaws that the yield per acre was much below the average and the crop was undoubtedly spoilt by the very heavy rain which occurred throughout the season

### E.—JELUTONG.

28. Nearly 1,000 tons of Jelutong Rubber were exported during the year, despite the great drop in price as compared with the previous year.

29. The preparation of this commodity in Brunei leaves very much to be desired and it does not command the same price as the Federated Malay States article.

It is, however, impossible to do anything to improve this state of affairs until a Forest Department is instituted in the State.

### V.—Lands, Surveys and Forests.

30. The land offices had a very busy year especially in the Brunei and Tutong Districts, but the applications were mostly for small areas and the 2,000 acres taken up by the Island Trading Company, Limited in 1926 for gambier cultivation were surrendered to Government.

31. Eight hundred and seventy-six applications for land were received, covering an area of nearly 10,000 acres, and of these 614 were approved.

32. By working at full pressure the Survey Office was nearly able to keep pace with the applications and in all 577 lots were surveyed with an area of 6,095 acres.

33. A Survey party from H. M. S. "HERALD" carried out a detailed survey of the Brunei river mouth between Pulau Chermin and Muara which should prove very valuable in the future.

34. The number of titles registered was 542, while 201 transfers and miscellaneous transactions were dealt with.

35. The terms for the alienation of land remained the same and it is satisfactory to see how quickly the country is being opened up, thus giving hopes of a fixed agricultural population.

36. The Forest Revenue amounted to \$7,018.

This is mainly derived from firewood and licences to work jelutong.

### VI.—Labour.

37. Despite an apparently large increase in the number of arrivals in the State as compared with departures therefrom, there continues to be a great shortage of labour and the Public Works Department was reduced to employing gangs of quite young boys on the maintenance of roads.

38. Four European employers of labour were recruiting Indian labour, but the Indians obtained from Singapore and the Federated Malay States proved far from satisfactory.

39. The following table shows the approximate number of labourers employed by the principal Companies operating in the State.

Race	Island Trading Company, Ltd.	British Malayan Petroleum Company, Ltd.	Five European Rubber Estates	Total
Bruneis and Kedayans ...	500	181	618	1,299
Chinese ...	...	192	151	343
Javanese ...	...	...	161	161
Dyaks ...	...	176	...	176
Indians ...	...	134	427	561
Others ...	...	...	35	35
<b>TOTAL ...</b>	<b>500</b>	<b>683</b>	<b>1,392</b>	<b>2,575</b>

## VII.—Courts.

40. The following return shows the number of cases instituted and disposed of in the Courts of the Resident and the Magistrates in the various Districts.

District	Resident's Court		Magistrate's Court		Total
	Criminal	Civil	Criminal	Civil	
Brunei ...	40	18	89	237	384
Tutong ...	5	5	9	36	55
Temburong ...	25	2	59	18	104
Muara ...	...	1	17	10	28
Belait ...	6	8	63	315	392
<b>TOTAL ...</b>	<b>76</b>	<b>34</b>	<b>237</b>	<b>616</b>	<b>963</b>

41. Out of 313 criminal cases 50 resulted in acquittals.

The total amount involved in Civil and Administration Suits amounted to \$40,708.

There were no appeals during the year.



## VIII.—Police and Prisons.

### A.—POLICE.

42. The strength of the Force on the 31st December, 1927, was as follows:—

<i>Sergeant- Major.</i>	<i>Sergeants.</i>	<i>Corporals.</i>	<i>Lance- Corporals.</i>	<i>Constables.</i>
1	4	3	3	49

a shortage of one constable.

43. Chief Inspector G. A. McAFEE was in charge of the Force during the whole year.

### DISCIPLINE.

44. All ranks have worked well during the year and arms and accoutrements were maintained in good order.

45. A musketry course was fired during the year with the following results:—

<i>Marksmen.</i>	<i>1st Class.</i>	<i>2nd Class.</i>	<i>3rd Class.</i>
1	5	4	50

46. Discipline has on the whole been good. Forty-six men were defaulted during the year, 3 were dismissed for offences under the Police Force Enactment, most of the other offences were of a trivial character.

### HEALTH.

47. The health of the Force has been good. Two men were sent to Labuan Hospital, 46 were treated at the Government Dispensary mostly for constipation and malaria. One man died in Brunei from malaria.

### BUILDINGS.

48. These have been kept in good order and repair during the year.

New quarters were taken over and occupied by the Chief Police Officer and a new barracks for single men at Brunei. The new Station at Bukit Bangar, Temburong District, was also taken over and occupied.

### FIREARMS AND WEIGHTS AND MEASURES.

49. Nine hundred and sixty-six firearms were registered, and five hundred and forty-four weights and measures tested.

## REGISTRATION OF ALIENS.

50. One thousand and eighty-one aliens were registered during the year.

Brunei	...	...	...	432
Muara	...	...	...	17
Temburong	...	...	...	223
Tutong	...	...	...	35
Belait	...	...	...	374

TOTAL ... 1,081

Twenty-five thousand seven hundred and twenty-nine persons entered the State from other countries and 17,121 persons left.

## CRIME.

51. There were 4 cases of serious crime during the year:—

- (1) Two women and a female child were murdered and their bodies burnt at Bukit Tanan, Tutong, on the 22nd January by two Tutong Malays named HASHIM BIN ABDUL RASIT and DOLLAH BIN ABDUL RASIT; both men were arrested, convicted and hanged.
- (2) An old Brunei woman named Dang Kulla was murdered in Kampong Yang Di-Pertuan Lama by a Sikh named PALLA SINGH who was arrested and sentenced to death; he escaped from prison and was eventually shot dead resisting re-arrest.
- (3) A Kedayan named NASIR BIN AWAT with some companions came across PALLA SINGH at Serdang and fired on him, he in his turn attacked these people and brained NASIR with a changkol.
- (4) A Kedayan named Kahar and his wife were sleeping in their house at the 14th Mile Tutong Road when two shots were fired through the floor fortunately hitting neither of them; two persons were arrested on suspicion but were discharged as no evidence could be procured against them.

52. The following is a comparative statement of offences reported to the Police for the last two years:—

			<i>Offences.</i>	<i>Property Lost.</i>	<i>Property Recovered.</i>
				\$ c.	\$ c.
1926	...	305	1,094	27	715 47
1927	...	353	1,510	10	174 30

## GENERAL.

53. One person was taken by a crocodile, 4 crocodiles were shot and rewards were paid out for 8 crocodiles caught.

54. Twenty-six motor cars were registered and licences issued to thirty-six drivers.

55. A proper fire brigade was established during the year and appliances purchased. It was called out on two occasions only, neither of them very serious.

## B.—PRISONS.

56. Eighty-eight prisoners were committed to prison during the year, their nationality being as follows:—

<i>Chinese.</i>	<i>Malays.</i>	<i>Kedayans.</i>	<i>Javanese.</i>	<i>Indians.</i>	<i>Dusuns.</i>
25	14	4	30	14	1

There were 22 prisoners in Brunei Prison on the 31st December, 1927, and one in Singapore Prison.

Three prisoners were earning marks at the end of the year and 4 were on ticket-of-leave.

One prisoner escaped during the year, a Sikh under sentence of death. He was shot dead resisting arrest.

Two prisoners were hanged for murder, the hangman from Singapore carried out the execution.

57. Discipline has been good, very few prisoners having had to be dealt with and they only for minor offences.

Health has been fair. Fifty prisoners were treated at the Government Dispensary on 216 occasions, 5 were admitted to Labuan Hospital, one died in Brunei Prison.

58. The prisoners were employed during the whole year on public works, mostly road making and reclamation.

Rotan work to the value of \$707.05 was made during the year, the Government took baskets etc., to the value of \$421.20 and private persons to the value of \$285.85. Rotan for the whole year cost \$583.36.

The average number of prisoners at work daily was 21.

59. During the year the diet was altered, Rangoon rice being supplied in place of Siam rice and sugar cane was added twice a week at the recommendation of the Medical Officer.

60. The Chief Police Officer acted as Superintendent of Prisons with a Sergeant in charge of the Brunei Gaol.

A new Gaol was in course of erection at the end of the year and is incorporated with the new Police Station in the Town.

### IX.—Post Office.

61. The Postal Revenue amounted to \$6,090 as compared with \$6,143 in 1926.

62. The following is a comparative statement of the business transacted during the last three years:—

—	1925	1926	1927
Letters, papers and parcels received ...	29,528	34,747	42,470
Do. do. despatched	16,359	18,936	21,842
TOTAL ...	45,887	53,683	64,312

63. Details of the business transacted are as follows:—

LETTERS				Postcards	Printed Matters	Parcels
Registered	Paid	Service	Taxed			
			OUTWARD			
3,680	16,915	1,181	101	269	493	203
			INWARD			
1,534	25,063	1,517	801	665	10,829	2,061

64. One hundred and eighty-three Money Orders were dealt with to the value of \$10,619 and 837 Cash-on-delivery parcels were received to the value of \$9,297.

65. Mr. LEONG AH NG acted as Postmaster throughout the year.

### X.—Radio-Telegraphs.

66. The number of messages handled by the Department during the year totalled 4,988 as compared with 4,687 in 1926 and 3,613 in 1925.

This figure is made up as follows:—

(a) Internal service	...	...	2,047
(b) Cable service	...	...	1,143
(c) Sarawak service	...	...	1,798

67. Tables are appended showing the comparison between traffic figures of 1925, 1926 and 1927.

### INTERNAL TRAFFIC.

	Handed in at and transmitted from :				Total number of messages dealt with	Average number of messages per mensem		
	Brunei	Labuan	Belait	Tem-burong		1927	1926	1925
Government	613	469	56	194	1,332	111'0	94'9	75'9
Public Prepaid	224	293	124	74	715	59'6	65'7	45'4
TOTAL ...	837	762	180	268	2,047	170'6	160'6	121'3

# EXTERNAL TRAFFIC (EASTERN EXTENSION TELEGRAPH CO. CABLE LABUAN)

	Messages transmitted from :				Messages received at :				Total number of messages dealt with	Average number of messages per mensem		
	Brunei			Labuan	Belait		Tem-burong	Brunei		Labuan	Belait	Tem-burong
	...	...	...									
Government	...	...	55	...	...	37	...	92	7.7	6.3	3.4	
Public Prepaid	...	...	295	...	18	588	...	1,051	87.6	80.8	64.7	
TOTAL	...	...	350	...	18	625	...	1,143	95.3	87.1	68.1	

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## (SARAWAK BRUNEI SERVICE)

	Messages transmitted from :				Messages received at :				Total number of messages dealt with	Average number of messages per mensem					
	Brunei			Labuan	Belait		Tem-burong	Brunei		Labuan	Belait	Tem-burong			
	...	...	...												
Government	...	...	58	3	...	61	1	...	3	40	...	166	13'0	14'3	32'0
Public Prepaid	...	...	77	263	523	254	7	2	378	128	2	1,632	136'0	128'3	76'4
TOTAL	...	...	135	266	523	315	8	2	381	168	2	1,798	149'0	142'6	108'4

## EFFICIENCY.

68. Brunei maintained an uninterrupted service throughout the year.

A new earth was put in at the Labuan Station in May. This was necessary as the earth lead had corroded and had broken at the earth junction. The Station was out of action for four days.

69. Owing to the improved design of instruments and components it has been possible to instal two valve receivers at the Brunei, Labuan and Temburong Stations. This is an economy for the old type of receiver required six valves and six transformers and as receiver failure was chiefly caused by the breaking down of transformers the advantage of a two valve receiver is considerable.

70. The Station at Temburong was moved to the new site at Bangar in December. The high tension supply for transmission at this Station is now obtained by the use of a Hand-generator and as primary cells are being used for lighting the filaments of both receiving and transmitting valves Engine, Dynamo and Secondary batteries can be dispensed with.

This is at present largely in the nature of an experiment as it is not known how the Hand-generator will stand up to the work required of it and there is a difficulty in obtaining suitable cells for lighting the filament of the transmitting valve. So far, however, the arrangement has proved satisfactory, signals being reported stronger than they were when the old system was in use.

71. Motor-generators have again been a source of much trouble during the year. Two machines were sent home for repair in June, but they have not yet been returned. These machines are the most uncertain factor in the service because they are constantly breaking down and it takes so many months to get them repaired.

## FINANCIAL.

72. The Revenue of the Department amounted to \$4,554.34. This shows a decrease of \$26.26 over the revenue of 1926.

The reason why the revenue does not show an increase corresponding with the increase of traffic is that the sum of \$716.20 has been paid to the Sarawak Government on account of last year's working.

This amount was included in the revenue for last year whereas it should have been deducted therefrom.

In addition the sum of \$840.82 due to the Sarawak Government on account of this year's working has not been included in the figure for this year.

73. The number of words in messages sent on Government Service amounted to 16,686 which at ten cents a word would have a value of \$1,668.60.

The total expenditure amounted to \$13,451.31 including Personal Emoluments.

### GENERAL.

74. Mr. L. R. WATTS was in charge of the Department throughout the year.

One chief and one assistant operator, one mechanic and one peon are stationed at the Brunei Station.

One operator and one peon at the Labuan and Belait Stations and one operator at Temburong.

75. In May "DLT" (Daily Letter Telegrams) Service was opened and from 15th to 31st December, "XLT" (Christmas and New Year greeting telegrams) were accepted for transmission to countries where these services are admitted.

## XI.—Medical.

### PUBLIC HEALTH.

76. The general death rate was 35.05 per mille against 28.29 in 1926. The infantile mortality was 417.8 per mille against 235.4 in 1926.

The birth rate was 33.05 per mille, the ratio of births to infantile deaths being 2.39 to 1.

77. Absolute reliance cannot be placed on these figures, but a consideration of them indicates a poorer condition of the public health than in 1926.

78. The cause of death as recorded continues to be speculative and of little scientific value, but matters should improve with the contemplated increase in the near future of the medical organisation.

79. There were several cases of beri-beri and malarial neuritis during the year and at one period an epidemic of influenza on Labu Estate.

### VACCINATIONS.

80. One thousand two hundred and forty-five vaccinations were performed during the year as against 1,085 in 1926. The number of births registered was 1,292, 702 males and 590 females.



## GENERAL.

81. Dr. H. W. FURNIVALL, Medical Officer, Labuan, acted as Medical Officer, Brunei, throughout the year and paid monthly visits.

82. The Brunei Government Dispensaries treated 2,482 cases and 103 patients from Brunei were admitted to the Labuan Hospital.

83. Out of 91 school boys examined in the Brunei Vernacular School only 5·5 per cent had spleen enlargement and the health and physique of the balance were excellent.

84. On the average there were 53 Europeans resident in the State during the year and they enjoyed excellent health.

One European child was born on Labu Estate.

85. The Principal Medical Officer, Straits Settlements, visited Brunei in February and made a comprehensive report on the present and future medical needs of the State.

## METEOROLOGICAL.

86. Meteorological returns are given in Appendices H and J.

87. Rain fell on 233 days out of the 365.

The highest rainfall recorded on any one day was 5·75 inches on Batu Apoi Estate.

**XII.—Legislation.**

88. Three meetings of the State Council were held during the year.

The only Enactment passed was the Arms and Explosives Enactment, No. 1 of 1927.

89. The constitution of the State Council was altered and the number of its members reduced to ten.

**XIII.—Education.**

90. At the end of the year there were 183 pupils on the register of the four Vernacular Schools distributed as follows:—

Brunei	...	...	...	106
Tutong	...	...	...	36
Temburong	...	...	...	17
Kilanas	...	...	...	24
TOTAL				183

91. The School at Belait was closed in the month of January, the attendance being too small and irregular to justify its existence.

92. The attendance at Brunei shows a very gratifying increase, but in the outstations the population is too scattered to enable the educational facilities to be utilised to the full.

In addition to this the pupils, being mainly children of the agricultural population, are absent for long periods when assisting their families in the annual rice cultivation.

93. The Chinese School in Brunei which is State-aided continued to prosper, but the small Chinese School at Labi in the Belait District was closed.

#### **XIV.—Public Works.**

94. Mr. C. E. TULL assumed duty as Officer in charge, Public Works Department, on the 1st January, 1927, and succeeded in carrying out the major portion of a very full programme during the year.

##### **ROADS.**

95. The road from Brunei to Tutong was at last completed at the end of May and officially opened by His Highness the Sultan on the 13th June.

96. Most of the wooden culverts have been replaced by reinforced concrete Monier pipes and the road was maintained in excellent condition and several improvements made.

97. The road from the Residency to Brunei Town was metalled and mepxalted and the work of metalling the main streets of the Town completed.

98. An earth road to take motor traffic was constructed to the Kumbang Pasang Estate of Brunei United Plantations Limited.

##### **BUILDINGS.**

99. New quarters were erected for the Chief Police Officer and the Officer in charge, Public Works Department and a start was made with the new Police Station and Gaol in Brunei Town.

100. New barracks for single Policemen and a reinforced concrete Powder Magazine were completed.

101. At the Residency new servants' quarters were built and a system of modern sanitation and a new electric lighting set installed.

### OUTSTATIONS.

102. The whole of the Temburong Station was removed to a healthier site at Bukit Bangar and was occupied on the 1st December. This involved the construction of a house for the Malay Magistrate, Government Offices, Police Station and barracks, quarters for two clerks and a wharf.

103. A new Customs Station was built at the mouth of the Labu River, and the old Stations at Labu and Pandaruan abandoned.

104. At Tutong a new wharf, market and Customs clerk's quarters were completed.

105. The wharf at Kuala Balai (Belait) was renewed. All Government buildings were maintained in good repair.

### WATER SUPPLY.

106. In Brunei Town water from the new reservoir was laid in to all shophouses and Government quarters at the beginning of the year, and proved most satisfactory throughout.

### GENERAL.

107. A row of twelve new shophouses is under construction in Brunei Town.

108. A new  $4\frac{1}{2}$  tons motor-roller, a lorry and a tar boiler were purchased.

109. A contract was let for the construction of a reinforced concrete bridge 360 feet long to replace the old wooden bridge over the Kedayan River.

This was more than half completed by the end of the year.

110. The total expenditure of the Department, including Personal Emoluments, was \$207,629.

### XV.—General.

111. His Highness the Sultan enjoyed excellent health during the year and in August paid an official visit to Labuan—his first departure from the State.

112. Mr. O. E. VENABLES acted as British Resident till the 10th March, when he went on leave and Mr. E. E. F. PRETTY acted as British Resident for the remainder of the year.

113. His Excellency Mr. J. L. HUMPHREYS, C.B.E., Governor of British North Borneo, accompanied by Major-General Sir NEILL MALCOLM, K.C.B., President of the Court of Directors of the Chartered Company of British North Borneo, paid a visit to Brunei in May.

114. The year was one of steady prosperity and future prospects are bright.

E. E. F. PRETTY,

*British Resident, Brunei.*

BRUNEI, 16th February, 1928.

## APPENDIX A.

Abstract of Revenue		1925	1926	1927
		\$	\$	\$
CLASS I				
DUTIES, TAXES AND LICENCES—				
Customs	...	132,682	177,472	166,612
Government Monopolies	...	65,615	73,467	83,304
Licences	...	15,025	16,337	18,654
Poll-Tax	...	3,566	3,024	2,688
Municipal	...	10,534	13,483	11,893
CLASS II				
FEES OF COURTS AND OFFICE, ETC.—				
Courts	...	5,968	3,969	3,958
Surveys	...	3,175	4,554	9,251
General	...	7,191	8,514	10,152
CLASS III				
POSTS AND TELEGRAPHS—				
Posts and Telegraphs	...	6,981	10,751	9,733
CLASS IV				
REVENUE FROM GOVERNMENT PROPERTY—				
Land Revenue	...	42,986	32,744	59,457
Cession Monies	...	15,175	15,175	15,175
Interest	...	6,363	7,854	11,258
TOTAL REVENUE	...	315,261	367,344	402,135
Repayment of Loans	...	30,312	29,490	38,735
TOTAL RECEIPTS	...	345,573	396,834	440,870

## APPENDIX B.

Abstract of Expenditure		1925	1926	1927
		\$	\$	\$
His Highness the Sultan	...	13,340	13,200	13,200
Native Chiefs	...	12,000	12,000	12,000
British Resident	...	15,396	16,022	18,117
Treasury, Customs and Monopolies	...	12,276	12,969	13,156
Land and Surveys	...	3,532	5,452	7,822
District Offices	...	8,028	8,074	9,877
Education	...	2,770	3,268	3,214
Marine	...	6,167	9,102	12,792
Police	...	29,555	29,364	30,703
Medical	...	5,009	5,112	5,560
Political Pensions	...	4,004	2,732	2,405
Headmen	...	723	754	643
Interest	...	17,666	17,402	17,142
Municipal	...	2,198	2,508	10,213
Miscellaneous Services, Annually Recurrent	...	18,281	30,799	13,828
Miscellaneous Services, Special Expenditure	...	10,339	18,353	23,223
Pensions	...	2,868	2,868	2,872
Posts and Telegraphs	...	15,763	17,106	17,086
Public Works Department	...	6,940	49,757	39,928
Public Works, Annually Recurrent	...	30,651		
Public Works, Special Services	...	22,280		
TOTAL EXPENDITURE		239,786	297,894	421,481
Repayment of Public Debt.		5,500	5,500	5,500
GRAND TOTAL		245,286	303,394	426,981

## APPENDIX C.

## FEDERATED MALAY STATES ACCOUNT

## (A).—LOAN ACCOUNT (31ST DECEMBER, 1927)

	Amount		Amount
	\$		\$
<b>By Loans:—</b>		<b>To Redemption of Monopolies (1906—1908)</b>	72,009
1906 ...	200,000	„ Purchase of Tulins (1906—1909) ...	7,045
1908 (December) ...	20,000	„ Purchase of Cession Monies (1908—1914)	174,377*
1909 (September) ...	80,000		
1911 (March) ...	100,000	„ Capital Expenditure:	\$
1913 (June) ...	20,000	Launch (1906) ...	20,000
1913 (September) ...	13,000	Residency (1906—1907) ...	8,000
1914 (April) ...	6,750	Government Buildings, Brunei	
		and Districts (1906—1907) ...	10,339
			38,33
		„ General Purposes ...	106,980
		„ Loan to His Highness the Sultan (made	
		in 1909) ...	41,000
<b>TOTAL ...</b>	<b>439,750</b>	<b>TOTAL ...</b>	<b>439,750</b>

## (B).—REDEMPTION ACCOUNT

	\$		\$
1-1-1927, Total, F.M.S.		Capital Repaid ...	32,750
Loan ...	439,750	31-12-1927 Balance due to F.M.S	407,000
<b>TOTAL ...</b>	<b>439,750</b>	<b>TOTAL ...</b>	<b>439,750</b>

## STRAITS SETTLEMENTS ACCOUNT

## (A).—LOAN ACCOUNT (31ST DECEMBER, 1927)

	\$		\$
<b>By Loans:—</b>		<b>To Purchase of Cession Monies</b> ...	13,546*
1922 (October) ...	10,000	„ Purchase of Political Pensions granted in	
1922 (December) ...	10,000	Settlement of Tulin Claims ...	6,454
<b>TOTAL ...</b>	<b>20,000</b>	<b>TOTAL ...</b>	<b>20,000</b>

## (B).—REDEMPTION ACCOUNT

	\$		\$
1-1-1927, Total, S.S.		Capital Repaid ...	8,000
Loan ...	20,000	31-12-1927, Balance due to S.S. ...	12,000
<b>TOTAL ...</b>	<b>20,000</b>	<b>TOTAL ...</b>	<b>20,000</b>

\* The total expenditure on the purchase of Cession Monies from other than Loan Funds and not included above amounts to \$80,870.

APPENDIX D.  
ASSETS AND LIABILITIES, 1926—1927

Liabilities	31st December, 1926	31st December, 1927	Assets	31st December, 1926	31st December, 1927
	\$ c.	\$ c.		\$ c.	\$ c.
Miscellaneous Deposits ...	20,032 90	68,994 53	Cash in Treasury and Bank...	205,666 01	182,067 14
Land Office Deposits ...	5,398 38	3,274 38	Loans (Secured) ...	50,955 61	74,710 74
Money Order Deposits ...	2,971 57	4,192 78	Advances ...	606 50	1,706 84
Investment Chandu Revenue Replacement Reserve Fund	12,261 12	27,901 37	Suspense ...	1,649 89	7,965 19
Balance of Assets over Liabilities ...	250,475 16	209,988 22	Investment (S. S. War Loan Bonds) ...	20,000 00	20,000 00
			Investment Chandu Revenue Replacement Reserve Fund	12,261 12	27,901 37
TOTAL ...	291,139 13	314,351 28	TOTAL ...	291,139 13	314,351 28



## APPEN

## COMPARATIVE RETURN SHOWING THE VALUE OF

—		Cutch	Coal	Plantation rubber	Jelutong rubber	Sago	Forest Produce	Dried Prawns
		\$	\$	\$	\$	\$	\$	\$
1923	...	238,000	102,820	363,200	49,881	39,353	37,296	35,390
1924	...	176,490	98,202	387,794	78,860	27,725	11,257	41,161
1925	...	234,000	6,760	1,318,217	174,288	23,841	11,302	38,577
1926	...	189,200	...	1,032,055	295,978	8,304	6,740	52,763
1927	...	202,840	624	892,627	177,029	9,293	26,546	54,179

## APPEN

## COMPARATIVE RETURN SHOWING THE VALUE OF

—		Rice	Tobacco	Piece Goods	Sugar	Petro- leum	Coconut oil	Salt	Mat- ches	Provi- sions
		\$	\$	\$	\$	\$	\$	\$	\$	\$
1923	...	157,992	68,499	100,298	44,169	29,251	9,817	3,788	2,969	41,806
1924	...	243,240	79,269	109,987	51,743	27,630	14,122	4,055	4,167	50,439
1925	...	242,811	99,416	151,275	50,505	35,583	16,056	4,330	4,411	63,678
1926	...	273,649	119,445	161,488	60,506	45,206	17,727	4,038	5,264	123,488
1927	...	298,812	111,763	111,486	67,107	50,336	21,521	4,268	5,464	113,818

## DIX E.

## THE CHIEF EXPORTS FOR THE YEARS 1923-1927

Live Stock	Hides and Horns	Brass-ware	Silver-ware	Kajang	Sarong	Other manufactured articles	TOTAL
\$	\$	\$	\$	\$	\$	\$	\$
28,086	3,642	2,639	...	...	...	...	900,307
32,806	4,302	8,593	...	...	...	...	867,190
26,425	4,535	15,734	6,057	...	...	...	1,859,736
18,447	4,440	14,764	6,542	3,573	9,905	4,624	1,647,335
27,987	4,308	16,008	11,182	4,882	9,625	4,506	1,441,636

## DIX F.

## THE CHIEF IMPORTS FOR THE YEARS 1923-1927

Flour	Machinery	Liquor	Coffee	Yarn	Other grains	Milk	Timber	Chandu	Other manufactured articles	TOTAL
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
11,874	...	...	...	...	...	...	...	...	...	470,463
17,591	191,194	9,807	...	...	...	...	...	...	...	803,242
21,727	276,862	14,247	11,306	18,209	...	...	...	...	...	1,013,418
22,988	265,071	16,405	16,247	25,487	10,877	19,432	8,628	28,652	209,311	1,434,889
392.24	204,502	17,515	17,349	20,793	12,297	21,276	5,388	24,326	219,006	1,359,276

## APPENDIX G.

COMPARATIVE STATEMENT SHOWING THE DISTRIBUTION OF TRADE BY DISTRICTS IN THE YEARS 1926-1927  
**Exports**

District	Plantation rubber		Jelutong rubber		Raw Sago and Sago Flour		Forest Produce		Cattle	
	1926	1927	1926	1927	1926	1927	1926	1927	1926	1927
	lbs.	lbs.	Pikuls	Pikuls	Pikuls	Pikuls	\$	\$	Head	Head
Brunei	807,533	875,454	74	80	12	10	1,475	3,083	12	27
Belaït	9,033	17,452	10,804	11,459	1,164	1,231	1,534	22,264	5	2
Tutong	85,344	91,927	4,036	3,414	131	144	2,182	954	205	74
Temburong	530,027	560,446	2,297	1,871	447	532	1,362	139	1	1
Muara	25,835	26,243	...	...	...	30	171	62	36	41
TOTAL	1,457,772	1,571,522	17,211	16,824	1,754	1,947	6,725	26,502	259	145

District	Pigs		Hides and Horns		Kajang		Marine Produce		Sarong	
	1926	1927	1926	1927	1926	1927	1926	1927	1926	1927
	Head	Head	Pikuls	Pikuls	Bundles	Bundles	\$	\$	\$	\$
Brunei	125	335	222	254	6,228	6,228	2,129	1,401	9,905	9,626
Belaït	...	...	13	14	...	...	...	...	...	...
Tutong	...	...	56	47	...	...	...	8	...	...
Temburong	...	...	7	10	...	...	...	...	...	...
Muara	25	44	8	4	...	...	...	6	...	...
TOTAL	150	379	306	329	4,622	6,228	2,129	1,415	9,905	9,626

APPENDIX G.—*Ctd.*

COMPARATIVE STATEMENT SHOWING THE DISTRIBUTION OF TRADE BY DISTRICTS IN THE YEARS  
1926-1927—*Ctd.*

**Exports—*Ctd.***

District	Brassware		Silverware		Dried Prawns		Cutch		Other manufactured articles	
	1926	1927	1926	1927	1926	1927	1926	1927	1926	1927
	Pikuls	Pikuls	\$	\$	Pikuls	Pikuls	Tons	Tons	\$	\$
Brunei ...	109	129	6,542	11,182	991	957	1,892	2,101	3,069	3,847
Belait ...	7	4	...	...	...	...	...	...	...	13
Tutong ...	...	...	...	...	...	...	...	...	1,259	525
Temburong ...	...	1	...	...	...	...	...	...	...	...
Muara ...	...	1	...	...	28	23	...	...	208	121
<b>TOTAL ...</b>	<b>116</b>	<b>135</b>	<b>6,542</b>	<b>11,182</b>	<b>1,019</b>	<b>980</b>	<b>1,892</b>	<b>2,101</b>	<b>4,536</b>	<b>4,506</b>

APPENDIX G.—*Ctd.*COMPARATIVE STATEMENT SHOWING THE DISTRIBUTION OF TRADE BY DISTRICTS IN THE YEARS 1926-1927  
**Imports**

District	Rice		Tobacco		Piece Goods and Sarong		Sugar		Petroleum	
	1926		1926		1926		1926		1926	
	Pikuls	1927	lbs.	1927	£	1927	Pikuls	1927	Gallons	1927
Brunei ...	22,945	26,936	56,206	53,427	93,937	63,358	4,041	4,966	41,654	44,103
Belait ...	4,725	5,668	18,664	13,975	26,643	27,428	667	648	17,455	16,797
Tutong ...	2,002	1,086	9,756	8,433	28,344	9,596	769	926	5,120	5,852
Temburong	2,639	4,568	7,554	8,520	8,183	7,529	484	590	4,350	4,608
Muara ...	1,958	1,472	4,236	3,173	4,380	3,575	380	346	3,000	1,172
<b>TOTAL ...</b>	<b>32,269</b>	<b>39,730</b>	<b>96,416</b>	<b>87,528</b>	<b>161,487</b>	<b>111,486</b>	<b>6,341</b>	<b>7,476</b>	<b>71,579</b>	<b>72,532</b>

District	Provisions		Machinery		Other grains		Salt		Flour	
	1926		1926		1926		1926		1926	
	£	1927	£	1927	Pikuls	1927	Pikuls	1927	Sacks	1927
Brunei ...	55,374	56,493	26,283	10,694	1,603	2,038	1,363	1,145	4,264	6,575
Belait ...	42,505	27,180	238,509	190,512	84	394	174	161	603	626
Tutong ...	8,326	10,310	1,239	334	23	28	206	304	241	279
Temburong	15,077	16,998	...	2,500	27	32	89	106	584	863
Muara ...	2,204	2,837	39	462	198	53	301	331	480	462
<b>TOTAL ...</b>	<b>123,488</b>	<b>113,818</b>	<b>266,070</b>	<b>204,502</b>	<b>2,025</b>	<b>2,545</b>	<b>2,133</b>	<b>2,047</b>	<b>6,172</b>	<b>8,805</b>

**APPENDIX G.—Ctd.**  
**COMPARATIVE STATEMENT SHOWING THE DISTRIBUTION OF TRADE BY DISTRICTS IN THE YEARS**  
**1926-1927—Ctd.**  
**Imports—Ctd.**

District	Coconut oil		Liquor		Timber		Yarn and Thread		Other manufactured articles	
	1926	1927	1926	1927	1926	1927	1926	1927	1926	1927
Brunei ...	1,541	2,237	1,321	1,751	7,007	3,712	23,554	18,048	117,661	138,232
Belait ...	659	400	1,037	777	...	...	529	922	56,291	41,010
Tutong ...	176	169	69	18	...	...	1,349	614	13,632	8,833
Temburong ...	205	402	147	464	1,621	1,618	...	1,000	18,143	26,044
Muara ...	20	98	22	68	...	58	55	209	4,078	4,857
<b>TOTAL ...</b>	<b>2,601</b>	<b>3,306</b>	<b>2,596</b>	<b>3,078</b>	<b>8,628</b>	<b>5,388</b>	<b>25,487</b>	<b>20,793</b>	<b>209,311</b>	<b>219,006</b>

# APPENDIX H.

## ABSTRACT OF RAINFALL OBSERVATIONS AT SEVEN STATIONS OF THE STATE DURING THE YEAR 1927

Month	BRUNEI DISTRICT				TEMBURONG DISTRICT			
	Brunei Govt. Offices	Subok	Gadong	Kumbang Pasang	Labu	Biang	Batu Apoi	
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
January	14'77	14'26	17'97	14'64	22'69	18'85	14'33	14'33
February	8'67	11'50	8'34	9'21	12'21	6'74	7'69	7'69
March	8'78	9'77	7'53	8'73	12'36	10'89	8'93	8'93
April	10'24	10'40	10'64	13'10	18'23	14'62	10'50	10'50
May	14'93	14'95	14'23	13'47	19'67	12'41	13'26	13'26
June	7'24	6'69	9'33	7'54	14'07	13'66	10'78	10'78
July	7'89	6'46	7'49	7'05	8'20	11'14	10'22	10'22
August	6'04	5'10	3'91	4'08	3'31	7'82	5'18	5'18
September	9'23	9'01	9'01	10'57	31'52	19'65	26'56	26'56
October	5'90	7'04	7'45	8'37	13'39	18'59	11'76	11'76
November	7'26	11'56	6'43	9'69	22'35	14'18	10'84	10'84
December	10'75	12'07	12'68	8'69	16'55	13'39	10'37	10'37
TOTAL	111'70	118'81	115'01	115'44	194'55	161'94	140'42	140'42

# APPENDIX J.

## ABSTRACT OF THERMOMETRICAL OBSERVATIONS AT THE GOVERNMENT OFFICES, BRUNEI TOWN, DURING THE YEAR 1927

Month	THERMOMETER MEAN (In Shade)			Highest Recorded Shade Temperature	Lowest Recorded Shade Temperature
	Maximum	Minimum	Range		
January	83.26	76.80	6.46	86	76
February	84.64	77.32	7.32	89	75
March	85.93	76.96	8.97	89	74
April	87.76	77.20	10.56	92	76
May	86.90	77.45	9.45	90	75
June	86.13	77.33	8.80	90	75
July	87.35	76.74	10.61	89	74
August	86.87	76.70	10.17	90	75
September	85.53	77.53	8.00	88	76
October	85.64	77.06	8.58	89	74
November	84.70	76.93	7.77	87	75
December	85.00	76.96	8.04	87	74
Mean Temperature	85.81	77.08	81.44		





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BARBADOS.  
BASUTOLAND.  
BECHUANALAND PROTECTORATE.  
BERMUDA.  
BRITISH GUIANA.  
BRITISH HONDURAS.  
BRITISH SOLOMON ISLANDS PRO-  
TECTORATE.  
BRUNEI, STATE OF.  
CAYMAN ISLANDS (JAMAICA).  
CEYLON.  
COLONIAL SURVEY COMMITTEE  
REPORT.  
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No. 1395.

ST. VINCENT.

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REPORT FOR 1927.

*(For Reports for 1925 and 1926 see Nos. 1303 and 1372,  
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# ST. VINCENT.

## ANNUAL GENERAL REPORT, 1927.

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### Geographical.

The Island of St. Vincent, which is of volcanic origin, is popularly supposed to have been discovered by Columbus on the 22nd January, 1498. It is situated in 13° 10' North Latitude, and 60° 57' West Longitude, at a distance of 21 miles to the south-west of St. Lucia, and 100 miles west of Barbados. It is 18 miles in length and 11 in breadth, and contains about 96,000 acres of land—about half the area of Middlesex. Most of the Grenadines, a chain of small islands lying between Grenada and St. Vincent, are comprised within the Government of the latter island. The principal is Bequia, situated at a distance of 9 miles from Kingstown, the capital of St. Vincent.

### Historical.

At the time of its discovery, St. Vincent, like some of the other small islands, was inhabited by the Caribs, who continued in the undisputed possession of it until 1627, when the King of England made a grant of the Island to the Earl of Carlisle. In 1660 it was declared neutral, and in 1672 it was granted to Lord Willoughby.

In 1748 St. Vincent was again declared neutral by the Treaty of Aix-la-Chapelle. In 1756, however, hostilities were renewed and the Island was taken in 1762 by General Monckton; and by the Treaty of Paris in the following year it was ceded to Great Britain, when General Melville was appointed Governor.

In 1773 an extensive portion of St. Vincent was allotted to the Caribs on condition that they acknowledged the King of Great Britain as their Sovereign.

In 1779 the Island surrendered to the French, and by the Treaty of Versailles, in 1783, it was restored to Great Britain.

### Language.

The language of the Colony is English.

### Currency.

British and American gold, five-dollar notes of Barclays Bank (Dominion, Colonial and Overseas) and British silver and bronze coins constitute the currency of the Colony. Government accounts are kept in sterling and commercial and banking accounts in dollars and cents. Imperial weights and measures are in use.

### Climate.

St. Vincent is reputed to be one of the healthiest of all the West Indian Islands. The climate may be divided into two seasons, wet and dry; the dry season from January to May, and the wet season from June to December. The coolest months are December to April.

The temperature throughout 1927 varied from 78.2° F. to 82° F. The highest was in October and the lowest in February; the mean monthly temperature was 80.3° F. as against 80.7° F. in 1926.

The rainfall at the Agricultural Experimental Station in Kingstown, 80 feet above sea-level, was 98.45 inches in 1927, as compared with 78.86 inches in 1926. The greatest fall for one day was 5.28 inches on 22nd October.

The reading of the barometer, corrected for instrumental error, elevation and temperature, ranged from 30.167 on 11th July to 29.814 on 17th November, 1927.

### I.—GENERAL.

There were no events of any outstanding political importance during the year under review and no constitutional changes.

His Excellency, Sir F. S. James, K.B.E., C.M.G., resided in the Colony for a month from 20th March till 23rd April.

### II.—FINANCIAL.

The financial position of the Colony on the 31st December, 1927, was :—

					£
Net Surplus at 1st January, 1927	...	...	...	...	21,509
Revenue in 1927	...	...	...	...	56,469
					<hr/>
					£77,978
Expenditure in 1927	...	...	...	...	61,564
					<hr/>
Net Surplus at 31st December, 1927	...	...	...	...	£16,414
					<hr/>



The revenue and expenditure for the last five years were as follows :—

					<i>Revenue.</i>	<i>Expenditure.</i>
					£	£
1923	...	...	...	...	52,031	48,394
1924	...	...	...	...	60,893	53,887
1925	...	...	...	...	62,450	53,190
1926	...	...	...	...	60,243	59,282
1927	...	...	...	...	56,469	61,564

The principal items of revenue in the last five years were :—

	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Import Duties	... 19,499	25,869	26,379	26,683	24,649
Export duties	... 3,073	3,032	2,982	2,959	2,587
Excise duty on rum	... 5,430	2,938	5,816	6,479	4,685
Land and House tax	... 5,892	5,882	6,337	4,124	3,442
Income Tax	... 2,044	3,947	4,504	3,014	2,480
Liquor trade duty	... 2,470	2,934	2,736	3,013	2,820
Postage stamps	... 1,588	2,334	1,732	1,774	1,875

The Public Debt of the Colony on the 1st January, 1927, was £9,730, of which £560 was redeemed during the year, thereby leaving the debt at the close of the year at £9,170, made up as follows :—

	£
The Public Works Loan, 1913	... 500
The Public Works Loan, 1914	... 900
*The Kingstown Board Loan, 1914	... 1,170
The Public Purposes Loan, 1915	... 1,400
The War Loan, 1916	... 2,000
The Windward Highway Loans, 1917, 1919 and 1920	... 3,200
	<hr/> £9,170 <hr/>

The accumulated sinking funds provided for redemption of loans stood on the 31st December, 1927, at £5,788, of which £4,924 was in respect of Government loans and £864 in respect of the Kingstown Board loan.

The investments on behalf of the Loans Redemption Fund stood at the close of the year as follows :—

				£	s.	d.
Imperial Government	National	War				
Bonds 5 per cent.	...	...	...	1,152	12	9
War Loan Stock 5 per cent.	...	...	...	2,602	15	8
Westminster Bank	...	...	...	1,168	1	10
				<hr/> £4,923	10	3 <hr/>

\* The Colony is only responsible for redemption of this loan in case of default by the Kingstown Board.

The investments on behalf of the Kingstown Board Sinking Fund stood as follows :—

	£	s.	d.
Westminster Bank ... ..	103	12	3
Imperial Government National War Bonds			
5 per cent. ... ..	760	18	4
	<hr/>		
	£864	10	7

The unexpended balance of £25,000 of the Eruption Relief Fund made up from donations from the public in England and elsewhere at the time of the eruptions in the Soufrière Volcano in 1902-1903, is invested and held as a reserve or insurance fund against any future elemental disaster. The annual interest derived from this balance, amounting to £750, is put to general revenue and applied to the relief of the poor. This amount, together with the Colony's Reserve Fund of £11,000, offers excellent security both for elemental disasters and economic depression.

The amount to the credit of the Public Property Insurance Fund which was started during the year 1926, stood at the close of the year 1927 at £2,238.

### III.—PRODUCTION.

One of the striking features of St. Vincent agriculture is the variety of the different kinds of produce. St. Vincent does not keep all its eggs in one basket. Arrowroot, cassava starch, Sea Island cotton, Marie Galante cotton, sugar, syrup and molasses, peanuts, cocoa, copra—all these, as well as other minor articles figure in the export list.

Perhaps the most noticeable feature of the year was the falling off in export of Sea Island cotton, 446,274 lb., valued at £39,204, being exported as against 589,499 lb., valued at £63,175, in 1926.

On the other hand, there was a remarkable increase in the export of copra, which commodity appears to have a great future before it. The export has increased steadily from year to year since 1923, as the following figures show :—

Year.	Quantity exported.	Value.
	lb.	£
1923 ... ..	356,626	2,959
1924 ... ..	645,973	5,430
1925 ... ..	661,309	5,512
1926 ... ..	762,563	9,826
1927 ... ..	1,198,441	10,083

The area under cotton in St. Vincent and the Grenadines during the year amounted to 4,358 acres, showing a reduction as compared with the previous season of 2,792 acres under Sea Island cotton and a reputed reduction of 306 acres under Marie Galante.

During the season 1926-27 there were, in St. Vincent and Bequia, 3,055 peasant growers, with an acreage of 3,088 under Sea Island

cotton; during the season 1927-28 there were only 1,733 peasant growers, with 1,594 acres.

The year under review was dominated by anxiety as to the sale of outstanding and long-accumulated stocks of cotton in the United Kingdom, and the British Cotton Growing Association advocated a policy of curtailment of acreage under cultivation. St. Vincent made proposals to other cotton-growing islands to restrict the export of Sea Island cotton to 50 per cent. of the average for the last five years and to institute a system of export under licence, but in view of the replies it was felt to be undesirable to initiate legislation to restrict production or export. The situation was considerably relieved by the action of the Fine Spinners' Association towards the end of the year in agreeing to buy up all outstanding stocks (except the superfine) at 1s. 8d. per lb.—a poor price but better than continual anxiety both for planters and for the Government which had advanced considerable sums of money to the Government Ginnery to purchase cotton on a co-operative basis, principally from peasants.

As regards arrowroot, in view of the large stocks remaining unsold in England it is satisfactory to note that increasing exports are being made to places other than the United Kingdom. The total amount exported was 3,195,478 lb., value £53,309; and of this amount the United States of America took 1,147,096 lb.—an increase of 232,717 lb. on the previous year, while Barbados took 273,549 lb., and Canada 260,018 lb. It is hoped that as time goes on Canada will absorb increasing quantities.

A very satisfactory feature of the year was the export of sugar, some 840,000 lb., valued at £6,947 being exported, whereas none at all had been exported in 1925 and 1926. Two estates in the Island recently erected new and improved sugar machinery. In addition to this, 171,063 gallons of syrup, valued at £10,459, were exported; but this export showed a considerable decrease on that of each of the last five years.

During the year under review 114 lb. of fibre manila hemp obtained from the abaca plant (*musa textilis*) were sent to the Imperial Institute for examination. The results were very favourable, showing that the Grade A sent from St. Vincent compares quite satisfactorily with the three commercial grades of manila hemp. It is too early to say whether the fibre can be produced here on a commercial basis, but it is hoped shortly to make a trial shipment for sale in London.

The question of building up a fruit and vegetable trade with Canada has occupied the attention of the Government and the Chamber of Agriculture and Commerce, but improved communication and considerable organization in methods of packing, grading, &c., will be necessary before such a trade can become an accomplished fact, and co-operation between the West Indian Islands will be essential.

The appended table shows the comparative amount of the annual exports of the principal commodities during the last five years :—

Articles.	1923.		1924.		1925.		1926.		1927.	
	Quantity.	Value. £	Quantity.	Value. £	Quantity.	Value. £	Quantity.	Value. £	Quantity.	Value. £
Arrowroot ... lb.	2,177,183	31,829	2,952,535	51,361	3,190,412	125,078	3,291,553	45,807	3,195,478	53,309
Cassava Starch ... "	366,085	3,700	634,631	6,838	470,284	4,160	443,075	4,077	543,681	4,940
Cotton—Sea Island ... "	585,143	47,292	520,369	50,219	473,219	57,655	589,499	63,175	446,274	39,204
Do.—Marie Galante ... "	5,084	217	1,540	58	9,673	464	30,275	1,514	53,381	2,669
Seed Cotton—Marie Galante. ... "	67,301	421	32,030	534	100,468	1,047	56,092	468	108,999	1,250
Cocoa ... "	121,374	1,755	130,910	1,820	154,821	2,345	174,599	2,461	135,490	2,267
Copra ... "	356,626	2,959	645,973	5,430	661,309	5,512	762,563	9,826	1,198,441	10,083
Sugar—crystallized ... "	145,944	1,863	22,400	280	—	—	—	—	840,000	6,947
Syrup and Molasses ... gal.	275,932	18,711	261,127	15,758	268,118	19,672	337,099	16,523	171,063	10,459
Cotton Seed ... lb.	150	2	475,003	2,216	26,485	53	88,106	398	151,903	1,266
Peanuts ... "	492,972	5,988	322,153	4,439	273,039	3,794	190,978	2,370	263,509	3,219
Peas—Dried ... "	138,910	1,595	90,705	984	90,476	866	50,185	476	38,719	352
Firewood ... cords	373	272	292	257	216	181	208	178	240	221
Whale Oil ... gal.	1,195	90	6,672	476	280	38	1,964	148	132	24
Cotton Seed Oil ... "	880	300	4,120	467	4	1	5,180	583	—	—
Hides and Skins ... "	—	54	—	151	—	146	—	221	—	221
Vegetables, Fresh ... "	—	3,216	—	2,550	—	2,581	—	2,107	—	1,915
Wool—Raw ... lb.	—	—	—	—	263	26	—	—	—	—
Logwood ... tons	15	75	30	145	4	4	—	—	—	—
Spices—Nutmegs ... lb.	13,846	115	14,452	494	10,360	492	20,190	887	21,025	695
Other kinds ... "	2,477	52	3,589	140	2,418	100	5,062	333	5,817	255
Corn ... "	262,975	1,326	143,862	752	143,210	627	91,059	388	98,879	618
Animals ... "	—	5,884	—	2,559	—	3,986	—	5,243	—	4,398
Lime Juice ... gal.	50	3	175	9	438	3	10	1	—	—
Fruit—Fresh ... "	—	137	—	143	—	271	—	290	—	328
Various, unspecified ... "	—	932	—	12,731	—	839	—	946	—	1,175
		£128,788		£160,810		£229,941		£158,420		£145,815

## IV.—TRADE AND ECONOMICS.

The total values of imports and exports for the last five years were :—

Year.		Imports. £	Island Produce. £	Exports.	Total. £
				Other. £	
1923	...	138,677	128,788	2,583	131,371
1924	...	160,028	150,811	51	150,862
1925	...	211,907	229,941	2,491	232,432
1926	...	203,606	158,420	4,489	162,909
1927	...	172,097	145,213	602	145,815

The following table shows the value of imports and countries of origin for the past five years :—

	1923. £	1924. £	1925. £	1926. £	1927. £
United Kingdom	41,147	51,834	75,914	67,425	55,812
Canada	40,862	40,686	46,108	45,373	40,540
British West Indies	7,736	12,641	15,180	10,896	12,789
India	1,080	869	646	3,476	1,229
Newfoundland	2,018	3,142	2,851	6,071	4,471
Ceylon	25	32	—	62	107
Other British Colonies	4,866	6,093	7,271	3,816	5,126
United States of America	28,943	33,983	46,302	46,737	36,663
France	1,226	1,264	1,736	2,845	1,485
Denmark	8	543	790	450	774
Germany	1,057	1,335	1,505	1,875	1,836
Holland	486	553	706	675	582
Foreign West Indies	15	68	669	550	1,003
Other Countries	9,208	6,984	3,547	3,266	3,494
Unclassified, including Parcel Post.	—	—	8,682	10,089	6,186

£138,677	£160,028	£211,907	£203,606	£172,097
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The following is a summary of the imports for the last five years :—

	1923. £	1924. £	1925. £	1926. £	1927. £
Class I.—Food, drink and tobacco.	52,712	60,842	68,717	71,423	64,104
Class II.—Raw materials and articles mainly unmanufactured.	19,016	18,104	19,547	19,402	16,735
Class III.—Articles wholly or mainly manufactured.	59,323	74,080	114,777	102,521	84,954
Class IV.—Miscellaneous and unclassified.	7,626	7,002	8,866	10,260	6,304

£138,677	£160,028	£211,907	£203,606	£172,097
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In order to encourage the importation of British motor vehicles, legislation was passed during the year exempting from import duties motor bicycles, motor tricycles, motor-cars and parts thereof made wholly from British materials by British labour. Foreign-made vehicles of this nature pay an *ad valorem* duty of 15 per cent.

During the year nineteen motor-cars were imported, nine of which were admitted free of duty as British cars.

The following are the percentages in the last five years of the principal countries from which imported articles are obtained :—

	1923.	1924.	1925.	1926.	1927.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
United Kingdom ... ..	29·67	32·39	35·82	33·12	32·43
United States of America	20·87	21·24	21·85	22·95	21·30
Canada ... ..	29·46	25·42	21·76	22·28	23·56
All other Countries ... ..	20·00	20·95	20·57	21·65	22·71

The following is a summary showing the destination and value of exports during the last five years :—

<i>Country of destination.</i>	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
United Kingdom ... ..	73,270	84,521	167,116	92,576	68,452
Canada ... ..	19,223	18,368	19,149	10,992	10,276
Bermuda ... ..	45	91	132	221	305
British West Indies ... ..	32,745	39,061	30,079	36,716	35,619
British Guiana ... ..	3,541	1,101	1,306	649	747
United States of America	2,480	6,931	14,136	20,613	28,491
Other Countries ... ..	67	789	514	1,142	1,925

## V.—COMMUNICATIONS.

### Shipping.

The number of vessels entered was 395, of 277,518 tons, and cleared was 395, of 277,400 tons. Four vessels of a total tonnage of 105 were registered during the year, three of which were built in the Colony.

A monthly passenger and mail service was maintained by the Canadian Government Merchant Marine during the year, and from time to time steamers of the Harrison and Columbian line paid calls.

The steamship service contemplated by the Canada-West Indies Trade Agreement of 1925 had not been provided at the close of the year under review.

Mails and cargo are also sent and received by sailing vessels to and from Barbados, Grenada, and Trinidad, whence there is direct communication by sea to the United Kingdom and the United States of America.

### Roads.

The road system of the Island consists of 34 miles of highway on the windward side, suitable for motor traffic, and 28 miles on the leeward side, about 15 miles of which are suitable for motor traffic.

The highway on the windward side is the main artery of traffic but on the leeward side the sea is the natural highway.

In addition to the highways there are some 280 miles of byways which act as feeders from the interior to the main roads.

### **Postal.**

There is a central post office in Kingstown, the capital of the Island, and 17 offices in out-districts.

Mails are sent to the windward side of the Island by motor-car, to the leeward side by motor-boat, and to the Grenadines by sailing vessels.

There is no inland telegraph service. The West India and Panama Telegraph Company maintained their cable station throughout the year and there is a wireless station operated by the Pacific Cable Board as part of the All-British System authorised by the West Indian Islands (Telegraph) Act, 1924, of the Imperial Parliament.

### **Telephones.**

The Government maintains a telephone system which connects Kingstown with exchanges in districts. There were 230 services and 188 miles of line in use.

## **VI.—JUSTICE, POLICE, AND PRISONS.**

### **(a) Justice.**

There was no sitting of the West Indian Court of Appeal in St. Vincent during the year.

Twenty-one criminal cases were tried by the Supreme Court and twenty-two convictions were obtained. The number of actions filed in the Supreme Court was 11. There were 8 appeals from Magistrates' decisions. The number of Causes filed in the Summary Jurisdiction of the Court was 65.

In the Magistrate's Court, District 1, the civil matters dealt with amounted to 717. 854 persons were charged in 1927, as against 687 in 1926. Fines collected amounted to £217, an increase of £75 on the preceding year.

In the Magistrate's Court, District 2, the civil matters dealt with amounted to 981. 1,367 persons were charged in 1927, as against 863 in 1926. Fines collected amounted to £229, as against £171 in 1926.

### **(b) Police.**

The authorised strength of the Force remained at two officers, 52 other ranks, of whom four were permanently employed at the prison.

The general health of the Force was considerably better than in 1926.

Discipline was on the whole satisfactory.

Fire drill was carried out weekly and all hydrants and fire appliances regularly inspected.

## CRIMINAL STATISTICS.

The table given below shows that, while during the last four years the number of cases taken up by the police have more than doubled, the number of cases in which no conviction was obtained has been very considerably reduced :—

			<i>Number of cases.</i>	<i>Number convicted or sent for trial.</i>	<i>Percentage of cases withdrawn or dismissed.</i>
1924	...	...	829	689	16·88
1925	...	...	1,304	1,090	16·41
1926	...	...	1,216	1,070	12·0
1927	...	...	1,679	1,514	9·82

The police recreation room and canteen, started in 1926, continued to run successfully during the year. The library has been increased to 82 volumes.

**(c) Prisons.**

The prison staff throughout the year consisted of :—

- 4 Police Constables, including the Non-Commissioned Office who is Keeper,
- 4 Warders, three of whom are skilled in trades,
- 1 Clerical Assistant,
- 1 Matron.

---

Total 10

---

At the beginning of the year the number of prisoners was 25, 23 males and 2 females. The total admissions during the year were 224, of whom 134 were males and 89 females, and 1 male juvenile. The daily average was 26.55.

The highest number of prisoners at any time was 44—the lowest, 14.

The general health of the prisoners was good and conduct satisfactory. No floggings were administered.

The dietary of the prisoners was placed on a more liberal scale, and improvements in ventilation of some of the cells were carried out.

## VII.—PUBLIC WORKS.

Considerable progress was made during the year in reconstructing the windward and leeward highways with the object of improving the surface, alignment, grade, and drainage so as to withstand the rapidly-growing increase in heavy motor traffic.

A substantial bridge was erected over the Warrawarrou River at Dauphine and causeways were constructed at Langley Park River, Park Hill, and Mount Greenan.

The road from Mount Hope Village to Wallilabou was very considerably improved by cutting and widening.



Considerable work was done in re-roofing and painting the gallery at Government House. A new electric-light plant was installed at Government House.

In order to provide increased accommodation for pupils an annexe was built on to the Girls' High School.

A water tank was erected at Paget Farm, Bequia, and a cistern provided for water at Union Island.

Owing largely to abnormal rainfall between September and November very considerable expenditure, amounting to £1,192, had to be incurred in respect of storm damage to roads, due to cliffs and bluffs breaking off and sliding into the drains, blocking them, and in some cases being thrown on to the road surface. The most serious damage done was at the Colnarie River which became flooded and divided itself into two sections, destroying part of the Colnarie Estate Road and threatening the foundations of the Colnarie Bridge, with a possibility of breaking through on the north of the bridge.

The old Park Hill Bridge was completely destroyed.

#### VIII.—PUBLIC HEALTH.

The population of the Colony at 31st December, 1927, was 50,770.

The birth-rate for the year was 37.25 per thousand, as against 39.46 in 1926.

Legitimate births numbered 525, and illegitimate births 1,366; the percentage of illegitimate births, viz., 72.2, being exactly the same as in 1926.

The death-rate per thousand for the year was 16.45, as compared with 19.42 in 1926.

The deaths of infants under one year (exclusive of still-births) numbered 199, as against 232 in 1926.

There were 120 still-births, of which 28 were legitimate and 92 illegitimate.

There were only 13 cases of enteric fever during the year, as against 48 in 1926, and 56 in 1925.

An epidemic of influenza passed over the Colony in the third quarter of the year, 1,435 cases being recorded, with 25 deaths.

There were 928 cases of diarrhoea in children under two years of age, but only 49 deaths.

A course of lectures and demonstrations was given during the year for those desirous of qualifying as Sanitary Inspectors. Twelve candidates took the course and four qualified and received local certificates of efficiency.

Nine prosecutions for milk adulteration as attested by the Babcock test were instituted during the year, and convictions secured in each case.

Much excellent work was done in the erection of 754 latrines in private houses and the provision of privy accommodation for 795 labourers at Estate Works, and similar accommodation for 405 resident estate labourers.

A new Public Health Ordinance was passed but had not come into operation at the close of the year.

## IX.—EDUCATION.

Education is not compulsory.

The following comparative table gives particulars in regard to primary education during the years 1925, 1926, and 1927 :—

	1925.	1926.	1927.
Number of Schools ... ..	27	28	28
Number of pupils on roll at 31st December.	4,884	5,407	5,732
Average attendance ... ..	2,648	2,892	2,969
Government Grant-in-aid ... ..	£2,939	£3,335	£3,686
Cost per head in average attendance	£1 2s. 2d.	£1 3s. 0½d.	£1 4s. 10d.

Eleven of the twenty-eight regular schools belong to the Government, which bears the whole cost of their maintenance. Religious denominations provide and are responsible for the upkeep of the buildings of the seventeen other schools. The salaries of the teachers, however, and the greater part of the other expenses of these schools, are paid from public funds.

There were eight other schools of a primary education standard, known as "Aided Schools," which were assisted by small Government grants to the extent of £137.

The Government maintains in Kingstown a secondary school for the education of boys—the Grammar School—and one for girls—the Girls' High School. The average attendance in 1927 was 71 boys and 58 girls, as compared with 70 boys and 50 girls in 1926. There is a system of Government Scholarships to the Grammar School for pupils from the primary schools.

There is an Island Scholarship awarded biennially under Ordinance No. 41 of 1921, tenable for not less than three and not more than five years at an approved University. The annual value is £250, and the cost of passage is also defrayed.

Provision exists for the Town Board of Kingstown to expend certain sums on scholarships at the secondary schools on lines similar to the Government Scholarships.

## X.—CROWN LANDS AND SURVEYS.

The revenue collected during the year totalled £1,067, as compared with £1,074 in 1926.

128 title deeds with diagrams were prepared, as compared with 107 in 1926.

No surveys by private surveyors were made, but the following were executed by the Department :—

1. Re-establishment of boundaries at Belair Land Settlement.
2. Re-establishment of boundaries at Troumaca.
3. Re-establishment of boundaries at Clare Valley-Questelles.
4. Survey to provide a road to allotments at Clare Valley-Questelles.
5. Survey of lots at Mahogany Hole—Rutland Vale.
6. Survey and subdivision into lots at Union Island.
7. Survey in connection with proposed water supply, Friendly Village.
8. Survey of road leading from windward highway at Stubbs to Victoria Village.
9. Survey and levels in connection with Chateaubelair water supply.
10. Survey and levels in connection with diversion at Happy Hill.

No work in connection with geological survey was undertaken.

#### XI.—LABOUR.

There is no immigration of labour into the Colony, but a considerable amount of emigration takes place annually, principally to Cuba and Santo Domingo for work on sugar-cane plantations. The emigrant is attracted by the delight of seeing the world, of a pleasant holiday *en voyage*, and by the lure of higher wages, forgetful of the greater cost of living in the countries he visits. During the year, 244 labourers went to Cuba and 422 to Santo Domingo, and there was a considerable amount of going to and fro between this Colony, Barbados and other West Indian Islands. The emigration season for Cuba and Santo Domingo may be said to date roughly from November in each year till the following June or July, when the emigrant returns with a flashy cap, a flashy shirt and suitcase and possibly a little money unless he has lost his earnings by gambling. Planters complain bitterly of the inconvenience caused to them by the annual exodus.

The average wage on an estate in St. Vincent is 1s. 2d. per day, but work is usually done by the task and a labourer who chooses can earn in some cases as much as 2s. in a day. It is found, however, that many of the labourers if better paid simply refuse to do a full week's work. A considerable amount of the work on estates is done by women.

Legislation (Ordinance No. 10 of 1927) was passed during the year, providing for the registration of recruiters of labour for

such foreign countries as should be declared by the Governor-in-Council, and for deposits to ensure the repatriation of such labourers without expense to the Colony, and also for provision being made for the families of such labourers during their absence, and for proper contracts of service being entered into.

## XII.—MISCELLANEOUS.

### *Banks.*

There is a branch of Barclays Bank (Dominion, Colonial and Overseas) with a Savings Department, and Government maintains a Savings Bank.

### *Agricultural Credit Societies.*

There are twenty-one Agricultural Credit Co-operative Societies in the Colony, but several of them are not functioning and some cannot be said to be working satisfactorily.

### *Government Cotton Ginnery.*

The purchase of Sea Island seed cotton and corn on profit-sharing terms was continued during the year.

R. WALTER,  
*Administrator.*

GOVERNMENT HOUSE,  
SAINT VINCENT,  
29th May, 1928.

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# ST. LUCIA.

## ANNUAL GENERAL REPORT, 1927.

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### Geography and History.

The island of St. Lucia is situated in latitude 13° 54' North and longitude 60° 59' West, at a distance of 24 miles to the south-east of Martinique and 21 miles to the north-east of St. Vincent.

It is 27 miles in length and 14 at its greatest breadth; its circumference is 150 miles and its area 233 square miles, rather less than Middlesex.

Castries, the capital, is situated at the north-western end of the island, and has a population, according to the census of the 24th April, 1921, of 5,899.

The port of Castries is one of the best harbours in the West Indies. It is land-locked and provides facilities for coaling and watering ships and for loading and discharging cargo which are unequalled in these islands.

The town of next importance is Soufrière, which lies about 12 miles to the south of Castries and contains a population of 2,480. Just below Soufrière Bay stand the remarkable twin peaks known as "The Pitons," rising sheer from the sea to a height of 2,619

feet in the case of the Gros Piton and to 2,461 feet in that of the Petit Piton. The boiling sulphur springs from which Soufrière gets its name are situate at Ventine, two and a half miles south-east of the town.

It is generally accepted that St. Lucia was discovered by Columbus, during his fourth voyage, on the 18th June, 1502. There is, however, a tradition amongst the French that it was discovered on the 13th December of a later year by some shipwrecked French seamen, who named it St. Alouziel or St. Alousie after the martyred virgin saint of that name, whose feast is commemorated on that date.

The island was then inhabited by the Caribs, and they remained in undisturbed possession for another century.

In 1605 67 persons proceeding to Guiana by the English ship "Olive Blossom" were forced by famine to land in the island, and they remained "to take their fortune in the fruitful isle." They were not able to stay longer than a month, however, when, reduced to 19 by wars with the Caribs, they left in an open boat and reached the mainland of South America in sore distress. This is the first recorded instance of a landing by Englishmen in the island.

In 1626 a Commission was granted by Cardinal Richelieu to MM. d'Enambuc and du Rossay to establish a French Colony "in the islands of St. Christopher and Barbados and in the surrounding territories," which presumably included St. Lucia, and in 1627 the island was granted by the King of England, along with all the Caribbee Islands, to the Earl of Carlisle, who appointed Lord Willoughby of Parham to be Governor of Barbados and the other Caribbee Islands. In 1635 it appears to have been granted by the King of France to MM. de l'Olive and Duplessis.

In 1638 Captain Judlee of St. Kitts (acting in the name of Lord Willoughby) and three or four hundred men took possession of the island and attempted to effect a settlement in it, but in 1640 these early colonists were either massacred or expelled by the Caribs.

In 1642 the King of France, still claiming a right of sovereignty over the island, ceded it to the French West India Company, who sold it in 1650 to MM. Honel and du Parquet for the equivalent of £1,600. The Caribs made repeated attempts to expel the French, but failed, and finally, in 1660, they concluded a treaty of peace with the latter.

In 1663 Thomas Warner, the natural son of the Governor of St. Christopher, made a descent on St. Lucia and took possession of it. The English continued in occupation until the Peace of Breda, in 1667, when the island was restored to the French. In 1674 it was re-annexed to the Crown of France and made a dependency of Martinique.

Throughout the eighteenth century recurrent struggles took place between the English and the French for possession of the island, the more important occurring in the latter half of the century. In 1762 it surrendered to the joint operations of Admiral Rodney and General Monckton, but was returned to France by the Treaty of Paris in the following year. In 1778 it again surrendered to the British, who remained in occupation until 1783 when, by the Peace of Versailles, St. Lucia was once more restored to France. It was from Pigeon Island, off the north-western coast of St. Lucia, during the period of this occupancy that Rodney sighted the French Fleet of 36 sail of the line, under the Comte de Grasse, prior to giving them battle and defeating them in the memorable naval action of the 12th April, 1782. The island was again taken by the British in 1794, but they were forced by the French Republican party in the island, aided by insurgent slaves under "Citoyen" Victor Hughes, the Civil Commissary of Guadeloupe, to evacuate it in the following year. In 1796, after an obstinate and sanguinary struggle, that party laid down their arms and surrendered as prisoners of war to a force 12,000 strong under the command of Sir Ralph Abercrombie, supported by a squadron under the command of Sir Hugh Christian. Sir John Moore, the subsequent hero of Corunna, took part in this operation as Brigadier-General Moore, and remained in the island as Governor thereafter. The British retained possession of the island until 1802, when it was restored to France by the Treaty of Amiens; but on the renewal of hostilities it surrendered by capitulation to General Greenfield on the 22nd June, 1803, since when it has continued under British rule. As a result of the operations of 1778, 1796, and 1803, no fewer than thirteen British regiments have "St. Lucia" inscribed on their colours.

### Climate.

The climate is healthy and compares favourably with other West Indian islands.

The temperature seldom rises above  $90^{\circ}$  in the hot season, May to November, or falls below  $70^{\circ}$  in the cool season, December to May; the yearly average being about  $83^{\circ}$  noon shade temperature. On Morne Fortune, just above Government House, where a portion of the former garrison was located, the temperature in the winter months falls as low as  $60^{\circ}$  and throughout the year it remains mild and pleasant.

The temperature records during 1927 show a mean noon temperature of  $85.7^{\circ}$  in the shade, the maximum temperature being  $96^{\circ}$ , the minimum temperature  $65^{\circ}$ , giving a range of  $31^{\circ}$ .

The total rainfall recorded at the Botanic Gardens, Castries, for the year 1927 was 105.08 inches, this was 26.28 inches above the average for 28 years (78.80 inches) and was the highest recorded in the Gardens since the year 1916.

### **Vital Statistics.**

On 31st December, 1926, the resident population of the Colony was computed to have been 25,594 males and 30,104 females—a total of 55,698. On 31st December, 1927, the figure increased to 56,068; males 25,747, females 30,321. The natural increase during the year was 703. Departures from the Colony exceeded the number of persons entering the Colony by 333, so that the net addition was only 370.

The births (including still-births which numbered 111) totalled 1,923—Males 978, females 945. The birth-rate (excluding still-births) was 32.3 per thousand of the population.

The number of deaths recorded (including still-births) was 1,220—Males 622, females 598. The death-rate (excluding still-births) was 19.7 per thousand of the population.

The principal causes of death as returned (excluding still-births) were malaria, 50; pulmonary tuberculosis, 56; phthisis, 30; syphilis, 54; cancer, 19; pneumonia, 112; worms, 104; infantile debility, 41; senile decay, 110.

### **Languages.**

English is, of course, the language of the Colony but the large majority of the population speak a French patois. Notwithstanding the fact that primary Education is imparted in English entirely, it is still true that comparatively few of the labouring classes can speak or understand our own tongue and in the elementary schools children have really to be taught English before they can assimilate a knowledge of the rudiments of Education. This is undoubtedly a very unsatisfactory state of affairs, but it can only be by persistent educational effort that the people as a whole will eventually learn to speak and think in the National language.

### **Currency.**

The coinage of Great Britain is the currency of the Colony, while local Government currency notes of the value of 10s. and 5s. are in circulation, as well as the notes of Barclays Bank and the Royal Bank of Canada, both of which have branches in Castries.

### **Weights and Measures.**

The Imperial weights and measures are in use in the Colony.

## **I.—GENERAL.**

The outstanding event of the year was the fire in Castries on the night of the 14th-15th May.

Originating apparently in a provision store, the fire spread from block to block, despite the most strenuous efforts of the fire brigade, police, rovers, scouts, and a host of other willing helpers, until seventeen blocks had been devastated. Houses, wholesale stores and retail shops, the Post Office, Government spirit warehouse,

Magistrate's court-house, Attorney-General's office, and a Friendly Society's hall were all destroyed, and the fire was only stopped by the sea. Practically all the business section of the town was burnt out.

Prompt measures were taken by His Excellency the Governor-in-Chief, Sir Frederick Seton James, K.B.E., C.M.G. (who fortunately was in residence in St. Lucia at the time) to cope with the appalling situation created by this disaster.

Relief work in the first instance comprised providing temporary homes for a number of people, the issue of clothing, and a daily issue of rations to a still larger number. This work was carried out by a Committee working under the direction of Lady James and His Honour Captain Plunkett, Acting Colonial Secretary. Food and clothing were received promptly from neighbouring islands, and the Castries Fire Relief Fund was opened. This Fund ultimately reached the sum of £17,181, which was made up of £5,000 from the Imperial Treasury, £6,147 from Colonial Governments, and £6,033 subscriptions from Societies and private individuals.

As soon as the immediate distress of the people had been relieved, His Excellency appointed the Castries Fire Relief Investigation of Claims Committee to consider all statements of losses arising out of the fire and advise as to the best method of relief. As a result of this investigation the sum of £16,894 was distributed in relief and building grants, the relief grants representing principally amounts allocated to assist in replacing household furniture and effects and stocks of small shopkeepers, and the building grants being amounts allocated to assist in rebuilding in concrete or masonry. In addition to these grants, the sum of £5,000 loaned to the local Government by the Imperial Treasury for ten years at 2 per cent. per annum has been re-loaned on the same terms to assist in rebuilding premises destroyed by the fire on condition that they are rebuilt in masonry or concrete.

Already a considerable area of the town is occupied by concrete or masonry buildings either completed or in course of erection, and these buildings are generally far superior to those destroyed.

It is noteworthy that the administration of the Relief Fund and Loan account, involving the disbursement of £22,000, cost only £35, of which £30 represents the cost of remittance of money from England.

The experience of this fire having proved the necessity for a more efficient fire brigade and apparatus, an enlarged brigade has been constituted and placed under the command of the Chief of Police, and some improved fire-fighting appliances have been purchased.

It was a very regrettable fact that so many of the properties and merchants' stocks destroyed by the fire were uninsured. Evidently many people regarded insurance as a luxury and others

regarded the payment of an insurance premium as a waste of money. Since the fire, the volume of insurance business in St. Lucia has increased very considerably.

## II.—FINANCE.

The revenue and expenditure of the Colony during the last five years were as follows :—

Year.	Ordinary Revenue. £	Ordinary Expenditure. £	Excess of Expenditure over Revenue. £
1923 ... ..	77,077	88,973	11,896
1924 ... ..	71,595	88,186	16,591
1925 ... ..	75,555	85,082	9,527
1926 ... ..	83,379*	84,488	1,109
1927 ... ..	82,491†	84,219	1,728

\* In addition £70,180 was received as proceeds of the issue of Debt Reduction Loan.

† Including Imperial Grant-in-Aid of £7,000.

During 1927 the rates of taxation were altered in certain instances as follows :—

(1) Additional 5 per cent. on Income Tax, incomes being assessed as before but the tax payable being increased.

(2) Rates of Import Duty on certain commodities were altered, most being increased but a few reduced.

The Public Debt of the Colony (including Guaranteed Loans) stood at £203,159 at the close of the year, being £3,450 less than at 31st December, 1926. The accumulated Sinking Fund for its redemption amounted to £58,717, as compared with £54,767 at the end of 1926.

## III.—PRODUCTION.

### Agriculture.

The prosperity of the Colony is mainly dependent upon agriculture, but, owing to a variety of causes, this has not been developed to the extent it might have been. There is evidence that the inhabitants are now realizing the absolute necessity for increased agricultural production and are turning their attention to a more intensive cultivation of their properties.

The agricultural interests of the Colony suffered a severe setback by the collapse during the year of the banana company who had started operations and had induced a large number of planters to take up the cultivation of this commodity on a fairly large scale. This calamity, as well as the greater one of the prevalence



of Panama Disease throughout the island, has removed the prospect of any considerable production of bananas in St. Lucia.

Another severe blow has been the appearance and rapid spread of "Withertip" and "blossom blight" among limes. Planters had taken up this cultivation with enthusiasm and the industry was doing exceedingly well when this disaster overtook it.

The cultivation of coconuts has increased greatly in recent years and planting on a fairly large scale is still going on.

Work is being maintained with energy on three of the four sugar factories in the island and, under new management, considerable development is taking place at the Roseau factory, which is situated in one of the most fertile valleys in the island.

Strong efforts are being put forth to stimulate the cultivation of fruit of various kinds, for which industry St. Lucia seems to be peculiarly well suited.

*Sugar.*—The area under cultivation remains at about 4,750 acres; unfavourable weather conditions prevailed throughout the reaping season and rendered harvesting difficult and prolonged, and the yield of sugar was low.

One factory did not complete the harvesting of the crop, consequently the output of sugar products was generally lower than that of the previous year. Market prices were more favourable, however, and the value of the products shows an increase.

The following figures show the quantity and value of sugar products exported during the last five years:—

#### Sugar (Vacuum Pan).

<i>Year.</i>					<i>Quantity.</i> Cwt.	<i>Value.</i> £
1923	...	...	...	...	62,940	75,304
1924	...	...	...	...	71,760	87,987
1925	...	...	...	...	97,772	72,559
1926	...	...	...	...	95,140	65,444
1927	...	...	...	...	88,640	74,200

#### Sugar (Muscovado).

<i>Year.</i>					<i>Quantity.</i> Cwt.	<i>Value.</i> £
1923	...	...	...	...	2,720	2,161
1924	...	...	...	...	9,940	9,508
1925	...	...	...	...	8,614	4,774
1926	...	...	...	...	9,138	5,414
1927	...	...	...	...	3,560	2,235

## Molasses and Syrup.

Year.					Quantity. Gals.	Value. £
1923	...	...	...	...	112,368	7,783
1924	...	...	...	...	159,589	12,323
1925	...	...	...	...	153,413	7,818
1926	...	...	...	...	156,424	8,659
1927	...	...	...	...	156,050	7,634

*Rum.*—The quantity and value of rum exported during the last five years is as shown below :—

Year.					Quantity. P. Gals.	Value. £
1923	...	...	...	...	649	64
1924	...	...	...	...	95 $\frac{3}{4}$	29
1925	...	...	...	...	63	25
1926	...	...	...	...	37	11
1927	...	...	...	...	1,700	212

Practically all the rum produced in the island is consumed locally.

*Cacao.*—A favourable market for cacao existed throughout the year. This caused increased attention to be given to cultivation. A good crop was reaped, the quantity exported being 2,146 cwt. more than in the previous year.

The quantity and value of cacao exported during the last five years are as follows :—

Year.					Quantity. Cwt.	Value. £
1923	...	...	...	...	12,817	21,527
1924	...	...	...	...	12,163	21,267
1925	...	...	...	...	10,444	22,339
1926	...	...	...	...	10,037	22,454
1927	...	...	...	...	12,183	30,560

*Limes.*—Lime oils continued to realise high prices during the year, ranging from 27s. to 37s. per lb. for hand-pressed oil and 21s. to 28s. for distilled oil. Prices decreased towards the close of the year. The concentrated and raw juice markets were not very active. The quantity of lime products exported has decreased somewhat owing to Withertip disease. It is expected that, owing to the failure of the second crop, the production for 1928 will be still further reduced.

The crop calculated in barrels of fruit was :—

1923	...	...	...	...	...	53,097
1924	...	...	...	...	...	52,238
1925	...	...	...	...	...	63,406
1926	...	...	...	...	...	59,415
1927	...	...	...	...	...	58,948

*Coconuts and coconut products* exported during the last five years are shown in the following statements :—

Coconuts.						
<i>Year.</i>					<i>Quantity.</i> Number.	<i>Value.</i> £
1923	...	...	...	...	99,945	351
1924	...	...	...	...	119,669	204
1925	...	...	...	...	123,516	432
1926	...	...	...	...	118,501	381
1927	...	...	...	...	96,813	351

#### Coconut Oil.

<i>Year.</i>					<i>Quantity.</i>	<i>Value.</i>
1923	...	...	...	...	Information not available.	
1924	...	...	...	...	Information not available.	
					gals.	£
1925	...	...	...	...	6,323	791
1926	...	...	...	...	19,081	3,847
1927	...	...	...	...	3,921	735

#### Copra.

<i>Year.</i>					<i>Quantity.</i>	<i>Value.</i>
					Cwt.	£
1923	...	...	...	...	1,847	2,350
1924	...	...	...	...	1,806	2,199
1925	...	...	...	...	1,981	3,563
1926	...	...	...	...	1,591	1,808
1927	...	...	...	...	4,077	4,409

#### Coconut Meal.

<i>Year.</i>					<i>Quantity.</i>	<i>Value.</i>
1923	...	...	...	...	Information not available.	
1924	...	...	...	...	Information not available.	
					Tons.	£
1925	...	...	...	...	12	106
1926	...	...	...	...	42	778
1927	...	...	...	...	7	88

*Bananas.*—The exports during the last five years were as follows :—

<i>Year.</i>					<i>Quantity.</i>	<i>Value.</i>
					Bunches.	£
1923	...	...	...	...	4,081	291
1924	...	...	...	...	4,190	256
1925	...	...	...	...	20,818	1,374
1926	...	...	...	...	46,209	4,356
1927	...	...	...	...	27,052	2,351

## IV.—TRADE AND ECONOMICS.

The state of the trade of the Colony as reflected by the values and quantities of imports and exports during the year 1927 as compared with 1926 was as follows :—

<b>Imports.</b>		1927.	1926.
		£	£
I. Food, drink, and tobacco		78,679	75,920
II. Raw material and articles mainly unmanufactured...		39,512	61,877
III. Materials wholly or mainly manufactured ... ..		103,640	107,889
IV. Miscellaneous and unclassified articles, including Parcel Post ... ..		7,014	6,550
Total Value ... ..		<u>£228,845</u>	<u>£252,236</u>

From the above figures it will be seen that the principal decrease in imports was in raw material and articles mainly unmanufactured, while there was a small increase in the value of food, drink, and tobacco imported.

The values of imports for 1927 and 1926 classified according to country of supply were as follows :—

	1927.	1926.
	£	£
United Kingdom ... ..	67,910	62,399
Other parts of the British Empire ... ..	62,647	62,515
Foreign countries ... ..	91,713	121,506
Parcel Post ... ..	6,575	5,816
	<u>£228,845</u>	<u>£252,236</u>

These figures show that the imports from the United Kingdom have increased by £5,511, or 8.8 per cent., while those from other parts of the British Empire remain the same and those from foreign countries have decreased by £29,793 or 24.5 per cent., so that the drop in the value of imports has been entirely at the expense of foreign countries.

The values of the imports of articles amounting to £5,000 or more each for 1926 and 1927 were as follows :—

<i>Article.</i>	1926.	1927.
	£	£
Bags, empty ... ..	6,371	4,131
Boots and Shoes ... ..	4,552	5,635
Coal, bituminous ... ..	53,551	28,407
Cotton—		
Piece goods ... ..	20,391	19,225
Other manufactures ... ..	2,501	5,366
Films, cinematograph ... ..	6,800	3,991
Fish, salted, dried, &c. ... ..	9,809	9,596
Grain, &c., Flour ... ..	23,896	24,411
Machinery, sugar manufac- turing ... ..	7,138	4,073
Manures ... ..	8,932	4,042
Oil, edible ... ..	6,158	7,169

The chief item of interest in this table is coal, bituminous, the value of imports of which has diminished by £25,144, or 47 per cent., due to a further depression in the bunker-coal trade. Cotton manufactures show an increase, while cinematograph films show a decrease due to the destruction by fire of the cinema in May, 1927, Sugar-manufacturing machinery and manures show considerable decreases.

There would appear to be some openings for British products, as shown by the following table :—

<i>Article.</i>	<i>Total value of Imports in 1927.</i>	<i>Imports from British Empire.</i>
	£	£
Cotton manufactures, piece goods ... ..	19,225	11,166
Manures ... ..	4,042	492
Iron and Steel manufactures ...	4,620	3,235
Wood and Timber—Shooks and Staves ... ..	2,831	366
Bags and Sacks, empty ... ..	4,131	2,291
Butter and substitutes ... ..	3,483	1,359
Oleomargarine ... ..	2,268	14
Motor-cars ... ..	2,141	1,637
Cement ... ..	2,114	628
	<hr/>	<hr/>
Totals ... ..	£44,855	£21,188
	<hr/>	<hr/>

**Exports.**

The values of exports in 1927, classified under four main divisions, were as follows :—

	1927. £	1926. £
I. Food, drink, and tobacco ...	134,348	125,557
II. Raw materials and articles mainly unmanufactured ...	47,391	89,914
III. Articles wholly or mainly manufactured ...	27,208	29,674
IV. Miscellaneous ...	371	99
V. Bullion and Specie ...	4,284	6,461
Total value ...	£213,602	£251,705

It is seen that the drop in the value of exports is due mainly to Class II, while Class I shows a moderate increase.

The following table shows the character and individual values of the main exports :—

	Value in 1927. £	Value in 1926. £
Cocoa ...	30,560	22,454
Limes and Lime products ...	27,337	28,140
Sugar ...	76,435	70,858
Fancy Syrup and Molasses ...	7,634	8,659
Logwood ...	2,027	4,986
Bunker. Coal ...	37,663	76,314
Copra ...	4,409	1,808

The values of the exports, domestic and other, classified according to destination were as follows :—

**EXPORTS (MERCHANDISE).**

<i>Destination.</i>		<i>Total 1927.</i>	<i>Total 1926.</i>
United Kingdom—	£	£	£
Domestic Exports ...	37,709		
Re-exports ...	189		
		37,898	62,360
Other parts of the British Empire—	£		
Domestic Exports ...	84,970		
Re-exports (not including Bullion and Specie).	7,655		
		92,625	64,422
Foreign Countries—	£		
Domestic Exports ...	40,204		
Re-exports (not including Bullion and Specie).	573		
		40,777	41,595
Ships' Stores—Re-exports ...	355		
Bunkers—Re-exports ...	37,663		
		38,018	76,867
Totals ...		£209,318	£245,244

From this table it appears that exports to the value of £24,462 have been diverted from the United Kingdom to other parts of the British Empire; exports to the former having decreased in value by £24,462 and exports to the latter having increased in value by £28,203. Exports to foreign countries decreased slightly, while the value of coal supplied to ships' bunkers decreased by £38,849, which more than accounts for the drop of £35,926 in the total value of exports of merchandise as above.

*Coaling.*—The coaling business, for which there are exceptional facilities and which brought considerable wealth to the Colony for many years, is not now in a very flourishing condition owing to the large reduction in the number of steamers calling for bunkers. Still, it affords appreciable though irregular occupation for a number of labourers in and around Castries.

## V.—COMMUNICATIONS.

*Shipping.*—The number of ships entered and cleared during the year was 996, of a total tonnage of 1,153,633 tons. Of this total, 477 were steam and 519 sailing vessels.

Mail communication is maintained by (1) a regular fortnightly steamer service to other West Indian Colonies and to Canada, (2) a monthly service via Martinique to Europe by means of the French mail steamer, and (3) a monthly service to the United States of America and the West Indian Colonies by the Quebec Steamship Company. There are other and frequent mail opportunities via Barbados and America and direct to Europe.

*Roads.*—The road system of the island has been much improved in sections by surfacing with road oil. The mileage of roads in the Colony is as follows :—

Main roads	...	...	...	...	...	...	125
Byways	...	...	...	...	...	...	143
Unclassified roads	...	...	...	...	...	...	74
							<hr/> 342

167 miles are suitable for motor traffic and are much used.

Passenger subsidised motor-bus services are regularly maintained between Castries and Dennery and Vieuxfort and Soufrière.

The Government 50-ton motor-launch supplies a regular service between Castries, Soufrière, Vieuxfort, and the villages of Anse-la-Raye, Canaries, and Laborie.

*Telegraphic communication* is maintained by the Pacific Cable Board; there is also the West India and Panama Telegraph Company, Limited, the latter no longer subsidised by the Government.

*Inland Telegraphs.*—There is no telegraph system in the island.

*Telephones.*—There are ten telephone exchanges operating throughout the island, to which are connected 93 miles of trunk lines and 182 miles of branch lines.

## VI.—JUSTICE, POLICE, AND PRISONS.

Justice is administered by the Royal Court, over which the Chief Justice presides, and by three District Courts, over which two Police Magistrates preside. The Royal Court has an original civil and criminal jurisdiction and also decides appeals from the Districts Courts. Appeals from the Royal Court are heard and determined by the West Indian Court of Appeal constituted under the West Indian Court of Appeal Act, 1919, of the Imperial Parliament.

An adequate Police Force is maintained to enforce the decisions of these bodies and to provide generally for the peace of the Colony and the security of life and property. Besides ordinary Police duties, this Force assists in the administration of Poor Relief, and it has, since the Castries Fire of May, 1927, provided the main portion of the Castries Fire Brigade.

There is one gaol, the Royal Gaol, situated in Castries, which contains separate prisons for male and female convicts. The institution has its own bakery which supplies excellent bread to all the public institutions and, in addition to stone-breaking and carrying out useful work outside the walls, certain of the prisoners are taught carpentry, tailoring, and shoemaking.

## VII.—PUBLIC HEALTH.

The general health of the island was good during the year. There was no epidemic sickness to be recorded. The Chief Medical Officer is responsible for the general supervision of matters of health and sanitation in the Colony.

Victoria Hospital, the principal hospital, is situated within a mile of Castries. A Resident Surgeon is in charge, and he is assisted by a staff consisting of a European matron and local nurses and dispensers. There is a private wing with six rooms assigned to paying patients.

There are three small district casualty hospitals close to the principal local dispensaries of Soufrière, Vieuxfort, and Dennery.

The pauper and leper asylums are situated in the Soufrière district, and are supervised by the Medical Officer of the district and a visiting Advisory Committee.

*Sanitation.*—The efforts of the Sanitary Department were mainly restricted to established routine work.

The work included the regular periodical inspection of premises—estates, barracks, and school-houses not excepted—the inspection of markets, slaughter-houses, bakeries, provision shops, mineral-water factories, ice factory, and the streets and drains of the various towns and villages.



Anti-malarial measures included reclamation work and cleaning of canals, ravines and drains. Pools in ravines were re-stocked with "millions" fish.

Fly destruction was carried out in towns and villages.

Attention was paid to the prevention of irregular disposal of excreta, of soil pollution, and of the pollution of rivers and streams.

An address on "Practical Sanitation" was delivered by the Chief Sanitary Inspector to the school teachers of the Colony, and a course of lectures on the same subject was delivered by the same officer to the District Sanitary Inspectors.

### VIII.—EDUCATION.

*Primary education* is free and compulsory. There are 49 denominational schools. Although education is compulsory between the ages of 6 and 14, little more than half the children of school age attend.

Grants-in-aid are made to these schools, mainly for the payment of teachers' salaries. The Inspector of Schools, a Government officer, is in charge of the administration of the grants.

English, reading, writing, arithmetic, the elements of grammar, geography and hygiene are taught. In the upper classes boys are taught elementary agricultural science, both practical and theoretical, and the girls needlework and domestic economy. The results are generally good.

*Secondary education* is supplied by St. Mary's College for boys, and St. Joseph's Convent School for girls, both situated in Castries. These schools prepare their pupils for the Cambridge University Local Examinations and the London University Matriculation Examination. Pupils have attained considerable success in these examinations. The St. Lucia Scholarship of £175 per annum, which was established in 1918 and suspended in 1925, was renewed in 1926 and made biennial. The Scholarship is awarded, on the results of the London University Matriculation Examination, to candidates having the requisite local and residential qualifications. A choice of universities, or of agricultural, scientific or technical colleges or institutions in Europe, Canada or the United States, approved by the Governor-in-Council, is permitted. The Scholarship is tenable for not less than three, and not more than five, years according to the time required for the completion of the course of study sanctioned. Up to 1927 seven Scholarships have been awarded.

Eighteen scholarships at St. Mary's College are awarded by the Government, on the results of competitive examinations to boys attending primary schools. These scholarships are tenable for one year and renewable after that from year to year for five years more.

## IX.—LABOUR.

There is, generally, an ample supply of labour for the requirements of the Colony. Employment is offered chiefly on sugar estates and other of the larger properties, by the Public Works Department for work on the roads, and by the coaling companies for bunkering steamers. Since the fire of May, 1927, there has been a constant demand for tradesmen, but it has not been an easy matter to secure an adequate number of skilled workers. So far as can be ascertained the relations between employers and labourers have been satisfactory. A fair number of St. Lucia labourers are recruited periodically for work in Cuba and Santo Domingo. All arrangements in regard to this labour are made through the Government, and the recruiting agents are required to enter into a strict bond and agreement for carrying out the terms of the contract made between them and the labourers.

## X.—MISCELLANEOUS.

His Excellency the Governor of the Windward Islands, Sir Frederick Seton James, K.B.E., C.M.G., paid two visits to the Colony during the year, from 23rd April to 28th June and from 11th August to 23rd August.

His Honour Captain Oliver Plunkett, Chief Justice, acted as Administrator throughout the year until the 17th November, except for the periods when His Excellency the Governor was in residence in the Colony. Mr. C. A. Pickwoad succeeded Captain Plunkett and administered the Government from 17th November to the end of the year.

Four British ships of war visited the Colony during the year, as follows :—

- H.M.S. " Calcutta " from the 20th to the 31st January,
- H.M.S. " Colombo " from the 21st to the 22nd February,
- H.M.S. " Wistaria " from the 23rd February to the 1st March,
- H.M.S. " Heliotrope " from the 24th to the 27th March.

There is now an excellent up-to-date hotel situated on the hill overlooking the harbour and town of Castries. The social club at the Vigie, which was established a little more than a year ago, promises to be a great success and has supplied a long-felt want.

CHAS. W. DOORLY,

*Administrator.*

ST. LUCIA,

12th June, 1928.

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No. 1397.

# ZANZIBAR PROTECTORATE.

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## REPORT FOR 1927.

*(For Reports for 1925 and 1926 see Nos. 1312 and 1346  
respectively (price 6d. each).)*



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1928

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# ZANZIBAR PROTECTORATE.

## ANNUAL REPORT FOR 1927.

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### History and Geography.

The Island of Zanzibar is situated in 6° S. latitude and is separated from the mainland by a channel 22½ miles across at its narrowest part. It is 53 miles long by 24 broad (maximum measurements), and has an area of 640 square miles.

To the north-east, at a distance of 25 miles, lies the Island of Pemba, in 5° S. latitude. It is smaller than Zanzibar, being 42 miles long by about 14 broad (maximum measurements), and has an area of 380 square miles.

In the year 1890 the supremacy of British interests in the islands of Zanzibar and Pemba was recognized by France and Germany, and the islands were declared a British Protectorate in accordance with conventions by which Great Britain waived all claims to Madagascar in favour of France and ceded Heligoland to Germany.

In 1891 a regular Government was constituted with a British Representative as First Minister. In 1906 the Imperial Government assumed more direct control over the Protectorate and re-organized the Government. In 1911 Seyyid Ali abdicated the throne and was succeeded by the present ruler, Seyyid Khalifa bin Harub, K.C.M.G., K.B.E. On the 1st July, 1913, the control

of the Protectorate was transferred from the Foreign Office to the Colonial Office, legal effect being given to the change of administration in the following year, when the Protectorate Council and the Offices of High Commissioner, British Resident, and Chief Secretary were constituted. In 1925 the Office of High Commissioner was abolished. In 1926, Executive and Legislative Councils were constituted.

### Languages.

The principal languages employed are English, Arabic, Swahili, Gujarati, and Cutchi.

### Currency.

The silver rupee of British India of the standard weight and fineness enacted in the Indian Coinage Act, 1906, is the standard coin of the Protectorate. The exchange value of the rupee was in 1927 fixed by the Government of India at 1s. 6d. gold. All other silver coins of British India, of the standard weight and fineness enacted in the same Act, are legal tender for the payment of an amount not exceeding Rs.5. Local copper pice are legal tender, at the rate of 64 pice to one rupee, for the payment of an amount not exceeding one rupee. There is a Government note issue of the denominations, Re.1, Rs.5, 10, 20, 50, 100 and 500.

### Weights and Measures.

The weights and measures used are those obtaining in Great Britain, together with the following native ones :—

	<i>Weights.</i>	<i>lb.</i>
Frasila : For produce generally	... ..	35
Gisla :		
For grain	... ..	360
For native salt	... ..	600
For groundnuts in husks	... ..	180
For groundnuts without husks	... ..	285
Tola : For gold and silver : equal to the weight of one rupee.	40 tolas = 1 lb.	

### Measures.

- Pishi or Keila : Equal to  $6\frac{1}{2}$  lb. avoirdupois weight of fresh water or 6 lb. of rice.
- Kibaba : Equal to 26 oz. avoirdupois weight of fresh water or  $1\frac{1}{2}$  lb. of rice : subdivided into  $\frac{1}{2}$  kibabas and  $\frac{1}{4}$  kibabas.

## I.—GENERAL.

In July, 1927, a Commission was appointed by His Majesty's Government to report, after inquiry in East Africa, on the possibility of instituting some form of closer union between the British dependencies in Eastern and Central Africa. The Commission was composed of the Rt. Hon. Sir E. Hilton Young, G.B.E., D.S.O., D.S.C., M.P. (Chairman), Sir George Schuster, K.C.M.G., C.B.E., M.C. (Financial Adviser to the Secretary of State for the Colonies), Sir Reginald Mant, K.C.I.E., C.S.I., and Mr. J. H. Oldham, with Mr. H. F. Downie of the Colonial Office as Secretary. The Commission visited Zanzibar early in 1928. It is not anticipated that it will report until the latter part of the year.

The policy of road development begun in 1924 was continued throughout the year. Particulars are given under the section "Communications." In his address to the Legislative Council on the Budget for 1928, the British Resident said :—

" I am more than ever convinced of the supreme importance of road construction in this Protectorate. Quite apart from the direct benefit of improved transport facilities, there is the still more valuable reaction on the minds and habits of the people of the country districts. I feel sure that Honourable Members will agree that the vitalizing effect of the new roads upon the people, and notably upon the inhabitants of Pemba, has already been remarkable. I also feel that the provision of roads has the added justification of discharging a moral debt to the agricultural classes, who have contributed in the past several millions of pounds to the revenue without receiving anything approaching an adequate return."

On the 28th October, an important change was effected in the incidence of taxation by the enactment of a decree raising import duties from 10 to 15 per cent. *ad valorem*. The object of the measure was to broaden the basis of taxation and to lighten by means of an increased bonus the burden borne for so long by the producers of cloves.

A Bill to authorize the levy of stamp duties was introduced in Council on the same date and subsequently passed. It was not, however, brought into force during the year.

At the same meeting it was announced that as a further measure of assistance to the clove industry the Government hoped to substitute payment of the clove duty in cash for payment in kind.

Mr. E. Costley-White, O.B.E., proceeded on leave prior to retirement in February. Mr. R. H. Crofton acted as Chief Secretary until the end of the year, and succeeded Mr. Costley-White when the latter retired on the 31st January, 1928.

## II.—FINANCE.

## (i) Revenue and Expenditure.

The following table shows the revenue and expenditure of the Protectorate for the last five years :—

					<i>Revenue.</i> £000s.	<i>Expenditure.</i> £000s.
1923	...	...	...	...	589	480
1924	...	...	...	...	493	452
1925	...	...	...	...	578	543
1926	...	...	...	...	449	650
1927	...	...	...	...	540	606

## (ii) Taxation.

Import duties generally were increased from 10 to 15 per cent. *ad valorem* on the 28th October.

## (iii) Assets and Liabilities.

						<i>Thousands.</i> £
Balance of assets on 31st December, 1926...	...					475
Difference on conversion of rupee assets at 13½ to the £	...	...	...	...	...	42
						<hr/> 517
Deficit, 1927	...	...	...	...	...	66
Balance of assets on 31st December, 1927	...					451
Loan to Kenya Colony and Protectorate	...					200

## (iv) Public Debt.

The public debt amounts to £100,000 in 3 per cent. debentures, which were issued to the British public in 1899 under authority of the Loan Decree, 1899. Two and one-third per cent. of the nominal value of the issue has been appropriated annually from general revenues to a sinking fund for the extinction of the debt which is repayable in 1931. The amount at the credit of the sinking fund on the 31st December, 1927, was £97,534, which is invested mainly in Colonial Government securities. As this sum, with interest, is already sufficient to meet the Bonds at the date of redemption, a Decree was enacted in August, 1927, providing for the cessation of contributions to the sinking fund.

## III.—PRODUCTION.

*Cloves.*—The quantity of cloves harvested was a little over 800,000 frasilas (a frasila equals 35 lb.). This high yield was mainly due to the fact that the bulk of the autumn crop of 1926 was not ready for picking until early in 1927. The spring harvest

was characterized by great irregularity in the development of the flower buds, which affected the quality of the dried cloves. Heavy and persistent rain in November and December seriously complicated the task of picking and drying the autumn crop, which was not completely harvested by the end of the year.

The figures for quantity and value for the last five years are as follows :—

					<i>Tons.</i> <i>1,000s.</i>	<i>£000s.</i>
1923	...	...	...	...	10.0	1,062
1924	...	...	...	...	8.5	810
1925	...	...	...	...	10.9	885
1926	...	...	...	...	7.9	572
1927	...	...	...	...	12.9	820

During the autumn harvest the price paid for picking was maintained uniformly at 5 pice per pishi (approximately 6½ lb.) both in Zanzibar and Pemba, as a result of co-operation on the part of the members of the Clove Growers' Association.

Prices were lower than in 1926, the range being Rs.11 to Rs.14½.

The bonus paid on young trees amounted to Rs.47,000 as in 1926. trees, amounted to Rs.4,56,000 for Zanzibar and Pemba, as compared with Rs.4,51,000 for 1926.

The bonus paid on young trees amounted to Rs.47,000 as in 1926.

*Copra*.—The export of domestic copra fell to 10,052 tons. The trees produced less than the average yield of nuts owing to adverse weather conditions which obtained at certain stages of the ripening period.

The figures for quantity and value for the last five years are as follows :—

					<i>Tons.</i> <i>1,000s.</i>	<i>£000s.</i>
1923	...	...	...	...	9.4	327
1924	...	...	...	...	10.2	353
1925	...	...	...	...	12.5	383
1926	...	...	...	...	12.8	375
1927	...	...	...	...	10.0	337

#### IV.—TRADE AND ECONOMICS.

##### Imports and Exports.

During 1927, the foreign trade of the Protectorate amounted to 130,000 tons, valued at Rs.4,79,91,763, being an increase of 0.74 per cent. in weight, and a decrease of 0.62 per cent. in value, as compared with the previous year.

The total imports (including goods directly trans-shipped, bullion and specie, and goods imported on Government account) amounted in value to Rs.2,36,14,986, and weighed 84,000 tons, this being a

decrease of 3.62 per cent. in value and an increase of 9.09 per cent. in weight as compared with 1926.

The total exports (including trans-shipment goods, bullion and specie, and re-exports) amounted to 46,000 tons weight, valued at Rs.2,43,76,777, being a decrease of 4.55 per cent. in weight and an increase of 4.46 per cent. in value as compared with 1926.

### Balance of Trade.

The following statement shows the value of imports into, and exports from, the Protectorate during the year under review :—

	<i>Rupees.</i>
Trade imports ... ..	2,27,37,747
Value of Government imports ... ..	8,77,239
Total imports ... ..	2,36,14,986
Domestic exports and re-exports ... ..	2,43,76,777
Excess of exports and re-exports over im- ports ... ..	7,61,791

The following table shows the balance of trade as represented by the excess in the value of exports over that of imports during the quinquennial period 1923-1927 :—

<i>Year.</i>	<i>Exports.</i>	<i>Imports.</i>	<i>Excess of Exports over Imports.</i>	<i>Percentage.</i>
	<i>Rs. 000's.</i>	<i>Rs. 000s.</i>	<i>Rs. 000s.</i>	
1923 ... ..	3,42,06	2,91,45	+ 50,61	+ 17.36
1924*... ..	2,91,11	2,61,19	+ 29,92	+ 11.45
1925*... ..	2,86,89	2,72,70	+ 14,18	+ 5.20
1926*... ..	2,37,12	2,44,65	— 7,53	— 3.07
1927*... ..	2,43,51	2,35,92	+ 7,59	+ 3.22

\* Figures for 1924, 1925, 1926, and 1927 are exclusive of silver specie.

The distribution of trade among the countries principally interested is indicated in the following table :—

<i>Countries.</i>	<i>Imports therefrom.</i>	<i>Exports thereto.</i>	<i>Total.</i>	<i>Percentage of Total Trade.</i>	
	<i>Rs. 000s.</i>	<i>Rs. 000s.</i>	<i>Rs. 000s.</i>	<i>1926.</i>	<i>1927.</i>
India and Burma ... ..	81,97	34,80	1,16,77	21.82	24.33
United Kingdom ... ..	42,57	16,97	59,54	14.04	12.42
Tanganyika Territory ... ..	27,83	43,22	71,05	16.94	14.82
France ... ..	1,93	37,08	39,01	11.55	8.13
United States of America ... ..	6,53	20,59	27,12	7.64	5.65
Kenya Colony ... ..	8,42	6,57	14,99	2.67	3.12
Italian East Africa ... ..	4,18	3,13	7,31	1.97	1.52
Germany ... ..	4,62	8,19	12,81	2.46	2.67
Italy ... ..	82	13,86	14,68	1.75	3.06
Dutch East Indies ... ..	14,80	14,60	29,40	2.76	6.12
Japan ... ..	12,67	97	13,64	1.80	2.84

The value of cloves exported to principal countries in 1926 and 1927 was as follows :—

	<i>United Kingdom.</i>	<i>British India.</i>	<i>Straits Settlements.</i>	<i>Germany.</i>	<i>United States.</i>	<i>Dutch East Indies.</i>	<i>Total.</i>
	<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>
1926 ...	32	186	36	27	167	45	572
1927 ...	76	228	81	26	151	109	820

The value of domestic and foreign copra exported to principal countries for the same periods was :—

			<i>France.</i>	<i>Italy.</i>	<i>Total.</i>
			<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>
1926 ...	...	...	338	29	375
1927 ...	...	...	244	89	337

The value of piece-goods imported from principal countries for the same periods was :—

		<i>United Kingdom.</i>	<i>Holland.</i>	<i>British India.</i>	<i>Japan.</i>	<i>Total.</i>
		<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>	<i>£000s.</i>
1926 ...	...	126	56	66	37	301
1927 ...	...	129	50	96	69	363

There is keen competition between British India and Japan for the supply of grey cotton goods.

### Trade Prospects.

The year 1928 will inevitably witness a reduction in the volume of export transactions, but the recovery which has taken place in the price of cloves has engendered a general feeling of hopefulness and may be expected to react favourably on the course of trade during the year.

## V.—COMMUNICATIONS.

### (1) Shipping.

The total number of ocean-going vessels which called at Zanzibar during the year 1927 was 353, representing a total gross registered tonnage of 2,344,571, an increase over the previous year of two vessels or 220,950 gross registered tons.

The number of coasting vessels entered and cleared during the year was 258 with a total gross registered tonnage of 107,627 tons, compared with 228 vessels with a gross registered tonnage of 106,208 in the year 1926.

During the year, 4,626 dhows entered the port, having an aggregate tonnage of 85,739, compared with 4,863 of 87,696 tons in 1926.

The Union-Castle Mail Steamship Company Limited and the British India Steam Navigation Company Limited, each maintain a monthly service to and from London, the former alternately via Suez and via the Cape.

Steamers of the Clan-Ellerman-Harrison and Ellerman-Bucknall lines call at Zanzibar monthly (irregular service).

A fortnightly service between Marseilles and Madagascar is provided by the Messageries Maritimes.

A monthly service of passenger and cargo steamers between Zanzibar and Genoa is kept up by the Compagnia Italiana Transatlantica.

The United Netherlands Navigation Company provides a good service of cargo and passenger steamers on their Holland-East Africa Line.

The British India Steam Navigation Company's m.v. "Dumra" maintains a coasting service between Lamu and Mikindani.

The Zanzibar Government steamers do regular weekly trips to Pemba and Dar es Salaam.

Messrs. Cowasjee Dinshaw & Brothers carry on a regular coasting service from Zanzibar to Kismayu.

A monthly service of passenger and cargo steamers from Hamburg via the Cape and Hamburg via Suez, one steamer each way, is kept up by the Deutsche Ost-Afrika-Linie.

A monthly passenger and cargo service from Massaua via Aden, the Italian Benadir ports and Kenya to Zanzibar and back is provided by the Compagnia Italiana Transatlantica.

The Osaka Shosen Kaisha maintain a monthly service between Zanzibar and Japan.

The British India Steam Navigation Company carry on a fortnightly service between Bombay and Durban via Zanzibar.

## (ii) Roads.

### ZANZIBAR.

The Gulioni-Darajani road .78 miles was completed and was opened by His Highness the Sultan in October and named "Hollis Road."

The Mfenesi-Mangapwani section 7.21 miles was continued and completed by October, when it was opened by His Highness.

The Kidimni-Ndagaa road which was built in 1926 was extended for a distance of half a mile.



The Mwera-Mdo road was extended for a distance of  $4\frac{1}{2}$  miles and from that point a new road 3.40 miles in length was aligned to Chuini at mile  $8\frac{1}{2}$  on the North Road, thus forming a loop line. The clearing and earthwork on this section was finished in December.

Another new road was aligned and begun from Tunguu to Unguja Kuu, distant  $20\frac{1}{2}$  miles from Zanzibar in a southerly direction. By the end of December, 71 chains were completed, 155 chains metalled, and 281 chains of foundation rolled.

#### PEMBA.

Improvements, such as extra drainage and the metalling of soft and hilly portions of the road, chief of which was Piki Hill, were carried out.

The loop line from Mzambaraoni 4.68 miles to Weti was completed as a metalled road in November, and two bridges were constructed. The existing road from Weti to Mtangatwani 7.5 miles was realigned and widened in places and several different forms of construction were tried with a view to avoiding the necessity of metalling.

The Mwembeduka-Kengeja section 3.98 miles was carried on and completed as a metalled road in July. From Kengeja to Kimbini, the port for Kengeja, a distance of 1.17 miles was surveyed and built as an earth road in August.

A road to link up Chake Chake with Mwembeduka, a distance of approximately 12 miles, was begun in July. When completed, direct communication by road will be established from north to south of the Island. The topographical conditions on this section, consisting mainly of razor-back ridges and deep, almost vertically-sided valleys, render construction a task of great difficulty. By the end of December 93 chains of earthwork had been completed.

A Public Roads Decree was enacted during the year for the purpose of placing the status, administration, and control of public roads on a proper basis. Power is given to the British Resident to declare new or existing roads to be public roads for the purpose of the law. Compensation for land expropriated is only given in cases where it can be shown that the making of the road has diminished the value of the property through which it is driven. Nominal compensation is payable for stone quarried for road purposes.

#### (iii) Postal.

During the year 1927, 498 vessels arrived and 525 sailed with mails, compared with 442 and 443 respectively for the previous year.

A comparative statement of articles dealt with in 1926 and 1927 is given below, and shows an increase of 77,632 for the year under review :—

			1926.	1927.
Letter mail :				
Foreign	...	...	1,075,051	1,119,867
Inland	...	...	206,527	225,869
Transit	...	...	28,337	35,548
Parcel mail :				
Foreign	...	...	12,379	12,642
		Total	1,322,294	1,393,926

## VI.—JUSTICE, POLICE, AND PRISONS.

### Justice.

Justice, in cases in which persons subject to the Zanzibar Order in Council, 1924, are concerned, is administered by His Britannic Majesty's High Court and the Courts subordinate to it, and in other cases by His Highness the Sultan's Court for Zanzibar and the Courts subordinate to that Court. Subordinate Courts are held by Resident Magistrates, Administrative Officers, and Arab Kathis. In addition, District Courts, composed of benches of local headmen, exercise a limited criminal jurisdiction. An appeal lies from the British Court and from the Zanzibar Court in the exercise of their original civil and criminal jurisdiction to His Majesty's Court of Appeal for Eastern Africa and thence to the Privy Council.

During the year 1927 there was a general increase in the volume of civil work in all courts, while on the criminal side there was a very considerable and equally general decrease in the number of cases for hearing. As compared with the two previous years there was a very satisfactory diminution in the more serious crimes, and it was noteworthy that there were no cases of robbery or dacoity before the Courts. The work of the Registry of Patents, Designs and Trade Marks showed a slight decrease in comparison with former years.

### Police and Prisons.

The Force consists of 6 Officers, 1 British Non-Commissioned Officer, Paymaster, Quartermaster, 18 Inspectors, 2 Clerks, 537 Rank and File, 22 Detectives, 36 Band and 12 Followers.

The year was devoid of serious crime. The crime of dacoity, of which a number of cases were reported in previous years, has been stamped out and no cases were reported. There were 48 cases taken to Court against traffickers in opium and 41 convictions obtained.

The number of fires reported during the year was 24, of which three only were of importance. A one-ton Morris fire-tender fitted with a 30-foot extension ladder was added to the fire-fighting plant during the year, and has considerably increased the mobility of the Brigade.

The health of prisoners was good. No case of capital punishment occurred during the year. Tailoring, carpentry, weaving, rope and mat making are practised in the Central Prison.

## VII.--PUBLIC WORKS.

Expenditure on Public Works Extraordinary amounted to £154,413 made up as follows :—

	£
Buildings ... ..	13,811
Harbour Works ... ..	37,251
New Road Construction, Zanzibar	24,274
Pemba	28,861
New Road (Gulioni-Darajani) ... ..	13,781
Town Planning ... ..	20,460
Acquisition of Huts, Trees, and Land	10,795
Miscellaneous Works ... ..	4,416
Water Supply and Drainage ... ..	764
<b>Total ...</b>	<b>£154,413</b>

Harbour Works construction proceeded during the year, the state of progress being in accordance with the Consulting Engineers' forecast and the costs well within the estimated rates.

It is anticipated that the whole of the work on land, with the exception of the warehouses, will be completed by the end of 1928, and that the warehouses, dredging, and finishing of the sheltering area, etc., will be completed by the middle of 1929.

## VIII.—PUBLIC HEALTH.

The general health of the population throughout the year was good. With the exception of smallpox, no cases of major epidemic diseases occurred. An epidemic of smallpox broke out in the last quarter of the previous year and there were 50 cases with 19 deaths during the year under review. Vaccination was extensively undertaken, 37,533 persons being so treated.

*Insect-borne Diseases.*—Malaria and filariasis are very common amongst the native population.

Antimalarial work was carried out in the town of Zanzibar and the District townships. This consisted of draining swamps, grading and cleaning water channels, a daily systematic search for larvae and their breeding places, and the oiling of cesspools and

collections of water which could not be removed. Larvivoracious fish are placed in tanks and wells attached to mosques and other public places. Prosecutions are instituted in cases where facilities for mosquito breeding are not removed.

*Helminthic Infections.*—These are very common in the native population. Practically all natives suffer from ankylostomiasis, and bilharzia and ascariasis occur with some frequency in certain districts. Taeniasis is rare. Extensive treatment for ankylostomiasis with carbon tetrachloride is carried out and suitable types of latrines to serve as models are erected in the principal villages.

*General Diseases.*—In the respiratory group, bronchitis and pneumonia are common, the latter being a frequent cause of death.

Pulmonary tuberculosis is a frequent cause of ill-health and death in the town of Zanzibar both of natives and Asiatics.

Venereal diseases are frequent, gonorrhoea being specially so. Syphilis is not a grave factor in general health. Yaws is a common infection, and treatment with bismuth potassium sodium tartrate is both efficacious and popular.

*Maternity and Child Welfare.*—A Maternity Home in charge of a qualified Midwife is situated on the outskirts of the Native Town. Maternity cases are admitted, and an out-patient clinic for women and children is conducted by the Midwife, and weekly visits paid by a Medical Officer.

*Research Work.*—During the year, the Economic Biologist investigated helminthic infections, particular attention being paid to ankylostomiasis and schistosomiasis. In the former, quantitative infection in the individual and the degree of soil infestation were studied, and in the latter the localities of the diseases were sought for and the snails in these areas identified. This investigation is still being continued. Work is also being done on *ascaris lumbricoides*.

Extensive work was carried out in investigating the flea population of town rats.

The capability of certain species of *anopheles* as vectors of microfilaria was proved.

*Legislation.*—The following Decrees affecting Public Health were promulgated during the year :—

The Druggists Decree provides for the registration of druggists after examination or upon the production of registerable certificates of qualification. A trade licence is imposed on registered druggists keeping open shop. The Schedules follow the Schedules of the Pharmacy Act, 1908 (Imperial) corrected up to 1925.

The Dangerous Drugs Decree has been enacted for the purpose of giving effect to the provisions of the Geneva Convention relating to the control of opium and other dangerous drugs. It is modelled

to a large extent on the Dangerous Drugs Act, 1920-1925 (Imperial) and the regulations made thereunder.

The Quarantine Decree gives effect to provisions of the International Sanitary Convention, 1926, to which the Protectorate is a party.

## IX.—EDUCATION.

### GOVERNMENT SCHOOLS.

*Post-Primary.*—The Teachers Training School provides a three-years' course in which the work is chiefly directed towards the production of trained teachers for the district elementary schools.

Six pupils in 1926 and five in 1927 left the school to take up work in various schools. Twelve new pupils were admitted in 1927, and the total number in training in 1927 was 27.

At the Commercial School, where a one-year course has been instituted under a local master in place of a two-years' course under a European, there were 20 entrants, four of whom had dropped out before the end of the year. All were Indians.

Of the 20 students who were examined at the end of the school course in February, 1927, eight were awarded diplomas and seven certificates. Nine of these are now in Government service.

*Primary and Elementary.*—At the combined primary and elementary town school (called the Government Central School) there were 356 pupils, and in the 12 district elementary schools, 618.

The new Arab Girls' School was opened in June and at the end of the year there were 38 on the roll.

Of the estimated Arab and African population of school age, 4.37 per cent. are in attendance at Government schools.

*Vocational Training.*—In the district elementary schools simple gardening and various kinds of hand-work form part of the curriculum. In the town 53 apprentices were under instruction in carpentry, metal work, tailoring and bootmaking, while at Chake-Chake seven carpenters were in training.

### INDIAN SCHOOLS.

The 12 Indian schools gave instruction to 1,074 boys and 674 girls, while at Government and Mission schools there were a further 131 boys and 83 girls, making a total of 1,962 pupils out of a population of 12,800 Indians resident in the Protectorate.

Three schools are now in receipt of grants-in-aid.

### MISSION SCHOOLS.

Under the various missions there are five schools for boys and six for girls, with a total of 183 boys and the same number of girls. Of these, 110 boys and 100 girls are Africans.

Adult mission classes show a total of 549 in attendance.

## MEDICAL INSPECTION.

The pupils of three of the Government schools and of two of the aided schools are subject to regular medical inspection.

## X.—LANDS AND SURVEY.

The cadastral survey of Zanzibar Town was completed in February, and the field staff were then employed on the traverse framework (triangulation being impossible) for the topographical map of the Island, which by the end of the year was about half finished.

The 1/480 map of the Town was completed, and sun prints issued to all Departments. The 1/4800 map is also completed, and will shortly be issued.

## XI.—LABOUR.

During the reigns of the first Sultans of the Albusaid Dynasty and down to the year 1897, when slavery was abolished, labour in Zanzibar was of two kinds, slave and free, the latter being that provided by the Wahadimu and Wapemba in accordance with agreements made with the Sultans.

With each successive measure adopted for the abolition of slavery, labour troubles increased, the freed slaves being disinclined to do more than was necessary for a bare subsistence, and this attitude has become more and more marked until to-day those that are left of them and their descendants are the most unproductive members of the community.

Immigrant labour is encouraged, and is used very largely for the cleaning and weeding of the plantations and for public works, while the natives of the Protectorate provide most of the labour required for the harvesting of the clove crop.

## XII.—MISCELLANEOUS.

**Meteorological.**

The meteorological records taken during the year in Zanzibar (Town) and in Pemba (Banani) compared with the normals are as follows :—

	Zanzibar (Town).		Pemba (Banani).	
	1892-1926.	1927.	1899-1926.	1927.
Temperature of the Air—				
Mean of daily maxima ...	F. 84.5	84.6	F. 86.6	86.1
Mean of daily minima ...	76.5	76.4	76.0	77.1
Mean of daily range ...	8.0	8.0	10.6	9.0
Mean ...	80.5	80.5	81.3	81.6
Rainfall (inches) ...	59.43	70.53	81.72	66.17
Rainy days ...	100	140	162	161

### **Legislation.**

Of the Decrees enacted in 1927 and not elsewhere referred to the following are deserving of mention :—

The European Officers' Pensions Decree makes provision for the granting of pensions, gratuities or other allowances in respect of the public service of European officers in the Zanzibar Protectorate. The Decree is in common form with similar legislation enacted in the East African Dependencies.

The Liquor Decree revises and expands the previous law on the subject. The principle adopted in regard to the possession and consumption of intoxicating liquor is one of general prohibition subject to exemptions. The Decree recognises two classes of persons—those upon whom exemption is conferred by law (referred to in the text as exempted persons) and those wholly prohibited, i.e., Arabs, Indians, and African natives. Provision is made for the control of importation, the keeping of stock books by licensees, the use of orders for purchase and other covering authority for conveyance and handling of liquor by native servants and labourers.

The Former Enemy Aliens Decree abolishes all restrictions on former enemy aliens imposed by war legislation.

The Ancient Monuments Decree has as its object the better preservation of monuments and other structures of archæological interest. The Decree follows the Kenya Ancient Monuments Preservation Ordinance, 1927.

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SOMALILAND.  
STRAITS SETTLEMENTS.  
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UGANDA.  
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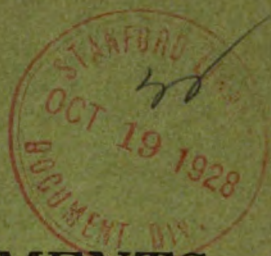
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# ANNUAL REPORT ON THE COLONY OF THE STRAITS SETTLEMENTS FOR THE YEAR 1927.

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## Prefatory Note.

### A.—GEOGRAPHY

The Straits Settlements, comprising at that time Singapore, Penang and Malacca, were transferred from the control of the Indian Government to that of the Secretary of State for the Colonies on the 1st April, 1867, by an Order in Council, issued under the authority of an Act of the Imperial Parliament (29 and 30 Vict. c. 115).

The seat of Government is the town of Singapore, at the southern point of the island, in latitude  $1^{\circ} 17'$  north, and longitude  $103^{\circ} 50'$  east.

### SINGAPORE

Singapore is an island about 27 miles long by 14 wide, containing an area of 217 square miles. It is separated from the southern extremity of the Malay Peninsula by a narrow strait about three-quarters of a mile in width, across which a causeway for road and railway has now been built. There are a number of small islands adjacent to Singapore and forming part of the Settlement, which also comprises Christmas Island and the Cocos Islands.

### COCOS OR KEELING ISLANDS

The Cocos or Keeling Islands, which were declared a British possession in 1857, were placed, by Letters Patent of 13th October, 1878, under the control of the Governor of Ceylon, and by Letters Patent dated the 1st of February, 1886, under the Governor of the Straits Settlements. In 1903, they were annexed to the Straits Settlements and incorporated with the Settlement of Singapore. The islands lie between latitude  $11^{\circ} 50'$  and  $12^{\circ} 45'$  south, and in longitude approximately  $96^{\circ} 50'$  east, 700 miles south-west of Batavia. The largest is 5 miles by  $\frac{1}{4}$  mile. There are large coconut plantations, and copra, oil, and nuts are exported. In 1902 a station on the Cape-Australia cable route was established on Direction Island, in the north-eastern part of the group. The population numbers about 795.

### CHRISTMAS ISLAND

Christmas Island, situated in the Indian Ocean, 190 miles south of Java, latitude  $10^{\circ} 30'$  south, longitude  $105^{\circ} 40'$  east, was annexed in June, 1888, and placed under the administration of the Governor of the Straits Settlements

by Letters Patent of 8th January, 1889. In 1900 it was annexed to the Straits Settlements and incorporated with the Settlement of Singapore.

The island, which is densely wooded, has an area of about 62 square miles. In shape it is a rough parallelogram, with deeply indented sides, its greatest length being about 12 miles, and its greatest breadth about 9 miles. The inhabitants, who number about 1,100, are all, with the exception of the District Officer and his staff, employees of the Christmas Island Phosphate Company, formed in 1897 to work the extensive deposits of phosphate of lime, to which the island owes its importance.

#### LABUAN

By Letters Patent issued at the end of 1906, provision was made for the incorporation of the Colony of Labuan in that of the Straits Settlements. The provision came into effect from the 1st of January, 1907. It became a separate Settlement in 1912.

The Island of Labuan is situated on the north-west coast of Borneo. Its area is 28.6 square miles. It is distant from the coast, at the nearest point, about six miles; from Brunei, the capital of the Protected State of that name, about forty miles; and from Singapore 725 miles.

Labuan has a fine port, Victoria Harbour (latitude  $55^{\circ} 16'$  north, longitude  $115^{\circ} 15'$  east), safe, and easy of access.

#### PENANG

Penang is an island about 15 miles long and 9 broad, containing an area of 108 square miles. It is situated off the west coast of the Malay Peninsula, at the northern extremity of the Straits of Malacca. On the opposite shore of the mainland, from which the island is separated by a strait from 2 to 10 miles broad, is Province Wellesley, a strip of territory forming part of the Settlement, averaging 8 miles in width, and extending 45 miles along the coast, the whole containing an area of 280 square miles.

The chief town is George Town, in  $5^{\circ} 24'$  north latitude, and  $100^{\circ} 21'$  east longitude.

#### THE DINDINGS

The Dindings, area about 183 square miles, include the island of Pangkor and a strip of territory opposite on the mainland, about 80 miles from Penang. Lumut (latitude  $4^{\circ} 15'$  north and longitude  $100^{\circ} 35'$  east), the headquarters on the mainland, possesses a harbour with deep anchorage, and coasting steamers call regularly.

### MALACCA

Malacca is situated on the western coast of the Peninsula between Singapore and Penang, about 110 miles from the former and 240 from the latter, and consists of a strip of territory about 42 miles in length, and from 8 to 25 miles in breadth, containing an area of 720 square miles. The town of Malacca is in  $2^{\circ} 10'$  north latitude, and  $102^{\circ} 14'$  east longitude.

### TOTAL AREA

The total area of the Colony and dependencies is about 1,600 square miles.

### CLIMATE

The climate varies but little during the year. The mean temperature in Singapore during 1927 was  $79.6^{\circ}$  F; in Penang  $82.3^{\circ}$  F; in Province Wellesley  $81.9^{\circ}$  F; in Malacca  $79^{\circ}$  F; and in Labuan  $82^{\circ}$ .

The mean maximum and minimum temperatures vary between  $87.3^{\circ}$  and  $74.3^{\circ}$  F. The maximum recorded was  $92.0^{\circ}$  F. on 14th and 17th March and on 31st May at Singapore. The minimum was  $70.0^{\circ}$  F. on 3rd February. The minimum in Singapore was  $68.5^{\circ}$  F. in May and June.

The mean maximum and minimum temperatures recorded in Penang vary between  $94.5^{\circ}$  and  $70.3^{\circ}$  F. The maximum recorded was  $98.0^{\circ}$  F. on 5th February, 1927. The minimum was  $70.0^{\circ}$  F. on 22nd October, 1927.

There are no well-marked rainy and dry seasons, the rainfall being fairly evenly distributed throughout the year. From carefully kept records of observations for a period of 10 years, from 1916 to 1925, it is found in Singapore that there is an annual average of 173 wet days; the average rainfall for the same period is 2526.7 m.m. In Singapore rainfall has been recorded regularly since 1862. The wettest year was 1913, with 3,442.37 m.m., and the driest was 1877, with 1,482.7 m.m. The average for the sixty-four years is 2,248.5 m.m. In Penang the average annual rainfall of the last three years is 178 wet days and the average rainfall for the same period is 3222 m.m. The actual number of wet days in Penang in 1927 was 172 and the rainfall 2276 m.m. In Labuan the average annual rainfall is about 127.34 inches.

The force of the monsoons is not much felt, though the prevailing winds are generally in the direction of the monsoon blowing at the time, *viz.*:—S.W. from May to October, N.E. from November to April. But it is not unusual to have south-east or south-west winds for portions of the day as early as March or April.



The rainfall recorded was as follows:—

	1926	1927
	—	—
Singapore ...	2,172·38	2,876·43
Penang ...	3,033·00	2,276·00
Malacca ...	1,945·08	2,623·80
Province Wellesley ...	2,612·00	2,591·19
Labuan ...	3,182·00	3,581·5
Dindings ...	1,559·00	1,491·70

## B.—HISTORY

### MALACCA

Malacca appears to have been founded as early as the middle of the thirteenth century, but did not rise to importance till more than a hundred years later when a crowd of fugitives arrived from Singapore after its sack by the Javanese. About 1409 Islam, which was wrecking the Hindu kingdoms of the Archipelago, consolidated this little Malay principality of many races and it became a centre of Malay trade and Muhammadanism.

It is one of the oldest European Settlements in the east, having been captured by the Portuguese under ALBUQUERQUE in 1511, and held by them till 1641, when the Dutch, after frequent attempts, succeeded in driving them out. The Settlement remained in the possession of the Dutch till 1795, when acting as the protectors of Dutch rights usurped by NAPOLEON the English occupied it. In 1818 it was restored to Holland, but was finally transferred to British rule by the Treaty of London (17th March, 1824), being exchanged for the British Settlements in Sumatra.

Under Malay and Portuguese rule Malacca was one of the grand entrepôts for the commerce of the east. But, when the Dutch pushed their commercial operations in Java and the Malay Archipelago, its importance gradually declined and it ceased to be of consequence as a collecting centre, except for the trade of the Malay Peninsula and the Island of Sumatra. This trade it retained under Dutch rule till the founding of Penang by FRANCIS LIGHT in 1786. In a few years from that date its trade almost ceased, and it became, what it has ever since been, a place of little commercial importance, but possessing great agricultural resources.

## PENANG

The earliest British Settlement in the Malay Peninsula was Penang, or Prince of Wales' Island, which was ceded in 1786 to the East India Company by the Raja of Kedah, who stipulated that the sum of \$6,000 should be paid to Kedah annually so long as the British occupied it. In 1800, owing to the prevalence of piracy, a strip of the coast of the mainland, now called Province Wellesley, was also acquired from the Raja of Kedah, the annual payment being increased to \$10,000. This Province has been enlarged from time to time, until it extends now from the Muda River to ten miles south of the Krian River. It is highly cultivated with rice, coconuts and rubber.

In 1805 Penang was made a separate Presidency, of equal rank with Madras and Bombay. In 1826 Singapore and Malacca were incorporated with it under one Government, Penang still remaining the seat of Government. In 1836 the seat of Government was transferred to Singapore.

With the establishment of Penang the trade of Malacca passed to it. But no sooner was Singapore founded than Penang in its turn had to yield the first place to that more central port, and came to depend chiefly on the local trade. At first inconsiderable, that trade has become large and important owing to the development of tin-mining and rubber planting in the adjacent Malay States.

The island of Pangkor and the Sembilan Islands were ceded to Great Britain by Perak in 1826, for the suppression of piracy. In 1874 the cession was confirmed by the Treaty of Pangkor, by which a strip of territory in the mainland opposite also became British. The whole now forms, under the name of the Dindings Territory, an outlying portion of the Settlement of Penang.

## SINGAPORE

Originally, it is surmised, a Colony of the Malay Buddhist Kingdom, Palembang or Sri Vijaya, in Sumatra, the ancient settlement of Singapore was a city (*pura*) colonised by people under Indian influence. Possibly before historical times it had been a Mon-Khmer settlement. Just before A. D. 1365 it was destroyed by the Javanese empire of Majapahit. Though in 1552 it was still a port of call from which Saint FRANCIS XAVIER despatched letters to Goa, yet from the fourteenth century it was little more than a fishing village until on the 6th February, 1819, Sir STAMFORD RAFFLES founded a settlement on it by virtue of a treaty with the Johore princes, and later acquired a title for the whole island. The new Settlement was at first subordinate to Bencoolen (Fort Marlborough) in Sumatra, but in 1823,

it was placed under the Government of Bengal; in 1826 it was, as above stated, united with Penang and Malacca, under the Governor and Council of the Incorporated Settlements.

### LABUAN

An attempt was made by the East India Company's servants, who were expelled from Balambangan by Sulu pirates in 1775, to establish a trading station in Labuan, but the project was soon abandoned. In 1846 the uninhabited island was ceded to Great Britain by the Sultan of Brunei because it was "desirable that British ships shall have some port where they may careen and refit, and deposit such stores and merchandise as shall be necessary for the carrying on of the trade with the dominions of Brunei," and the consideration given was an undertaking to suppress piracy and protect lawful trade.

The island was at first occupied only as a naval station. From 1848 until the end of 1889 it was governed as a separate Crown Colony. Until 1869 it was assisted by grants-in-aid from the Imperial Exchequer, but this help was then withdrawn, and the Colony supported itself, though with difficulty. In 1889 its financial troubles came to a head, and, as it was thought that the island could be more economically governed in connection with the territories of the British North Borneo Company, the administration was entrusted, from the 1st January, 1890, to the care of that Company, whose principal representative in Borneo was given a commission as Governor of Labuan. At the end of 1905, the Governor of the Straits Settlements was appointed also Governor of Labuan, the island still remaining a separate Colony. On the 1st of January, 1907, it was annexed to the Straits Settlements, and declared part of the Settlement of Singapore. On the 1st of December, 1912, it was constituted a separate Settlement.

### C.—PRINCIPAL LANGUAGES

Malay is the language of the Malays of the Colony. Moreover Muslim traders, the Portuguese, the Dutch and the English have all used and spread it as a *lingua franca*, though to-day it shows signs of being superseded by English as the language of commerce. It belongs to the Austronesian family which covers an area from Formosa to New Zealand and from Madagascar to Easter Island. To the western branch of this family belong Malay as well as the languages of such immigrants to the Straits Settlements as the Bugis from the Celebes, Sundanese, Madurese and Javanese, and the Minangkabau people of Sumatra. Even within this western branch, however, languages differ more widely than English from Dutch or French from Italian. With Islam

the Malays adopted the Persian form of the Arabic alphabet but there is a growing literature in romanised script.

The Chinese languages spoken in the Straits Settlements are those of the districts in the south of China, principally in the Kwangtung and Fukien Provinces, from which the immigration is almost entirely drawn. They are divided into Hokkien, (Amoy, Chiangchiu and Chuanchiu districts), spoken by about 44.4% of the total Chinese population of the Colony; Cantonese, 23.4%; Tiochiu, 15.4%; Hakka, 7.6%; Hailam, 6%; Foochow, 1.6%; Hokchhia, .8%; Henghua, .4%; and Shanghai and other northern dialects, .4%.

The Indian population of the Straits Settlements at the last census was 104,628, of whom 96,835 or 92 per cent were Southern Indians.

There has been an increase of some ten per cent in the Indian population since 1921, but the relative proportions of the various elements remain the same. Of the Southern Indians, who form the bulk of the Indian population, practically all speak one or other of the Dravidian languages, *i.e.*, Tamil, Telegu, Malayalam and Canarese. The vast majority (about 94 per cent) speak Tamil and of the remainder the Telugus slightly outnumber the Malayalis, while the number of Canarese is negligible.

Three quarters of the remaining Indian population of the Colony consist of Northern Indians, whose principal languages are Punjabi, Bengali and Hindustani. The balance comprises a few hundreds from the Bombay Presidency, who speak Gujerati and Mahrati, and also a few hundred Burmese.

#### D.—CURRENCY

The standard coin of the Colony is the Straits Settlements silver dollar. This and the half-dollar (silver) are unlimited legal tender. There are subsidiary silver coins of the denominations of 20 cents, 10 cents and 5 cents. There is also a nickel coin of 5 cents denomination. These subsidiary coins are legal tender to the amount of two dollars. There are copper coins of the denominations of 1 cent,  $\frac{1}{2}$  cent and  $\frac{1}{4}$  cent, but there is now practically no circulation of coins of the latter two denominations. Copper coin is legal tender up to one dollar. Currency notes are issued by the Colony in the denominations of \$10,000, \$1,000, \$100, \$50, \$10, \$5, and \$1. Notes of the first two denominations are used mainly for the bankers' clearances.

During the War and for some years after notes of the denominations of 25 cents and 10 cents were issued. These notes are no longer issued, but a fair quantity of them still remain in circulation.

In 1906 the Currency Commissioners were empowered to issue notes in exchange for gold at the rate of \$60 for £7, and by Order of the King in Council gold sovereigns were declared legal tender at this rate, the sterling value of the dollar being thus fixed at 2s. 4d. Gold, however, has never been in active circulation in the Colony.

The Currency Commissioners may accept sterling in London for dollars issued by them in Singapore at a fixed rate of 2s. 4 $\frac{3}{4}$ d. to the dollar, and, *vice versa*, may receive dollars in Singapore in exchange for sterling sold in London at the rate of 2s. 3 $\frac{3}{4}$ d. to the dollar. The exchange fluctuations in the value of the dollar may therefore vary between these two limits.

### E.—WEIGHTS AND MEASURES

The standard measures recognised by the laws of the Colony are as follows:—

- (a) Standard of Extension, the Imperial yard.
- (b) Standard of Weight, the Imperial pound.
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Among the Asiatic commercial and trading classes, Chinese Steelyards (called "Dachings") of various sizes are generally employed for weighing purposes.

The undermentioned statement shows the principal measures used by these classes with their relation to English standards:—

<i>Local term</i>	<i>Relation to English standard</i>
—	—
The chupah	equals 1 quart.
The gantang	equals 1 gallon.
The tahlil	equals 1 $\frac{1}{2}$ ozs.
The kati (16 tahils)	equals 1 $\frac{1}{2}$ lbs.
The pikul (100 katis)	equals 133 $\frac{1}{2}$ lbs.
The koyan (40 pikuls)	equals 533 $\frac{1}{2}$ lbs.

### I.—General

At the close of 1926 there was a surplus of \$62½ millions. This was reduced by the end of the year under review to \$61 millions as a result of the year's working. The financial position is therefore sound: but, in view of the fact that the annually recurrent expenditure is overtaking the normal annual revenue, the future is likely to see a steady diminution in the surplus balances, if the increasing demand for large public works is to be satisfied.

In spite of the fall in rubber prices there was little diminution in the activity of the land market and prices of town and suburban lands continued to rise, although agricultural land was not in such demand as in 1926. Considerable areas were acquired, as the purchases for schemes of town improvement approved in 1925 were completed during the year under review and as large acquisitions were also made for the Military Authorities.

The modified Rubber Restriction Scheme, which had been introduced on the 1st November 1926, making the pivotal price 1/9 (75 cents), continued in operation throughout the year. The price of rubber was steady at 65 cents to 70 cents until July and September when there was a period of depression. Towards the end of the year the price again rose to 70 cents. The failure of the price to reach the pivotal figure is attributed to the increase of London stocks. One satisfactory feature of the year was the substantial decrease of the large carry over of export rights accumulated by estates, when the percentage of release was 100. Rubber smuggling increased to a regrettable extent and measures were adopted with a view to suppressing it.

HIS MAJESTY THE KING was graciously pleased to appoint His Excellency Sir L. N. GUILLEMARD, K.C.B., K.C.M.G., a Knight Grand Cross of the Most Distinguished

#### *Erratum.*

*Page 8, last line.*

*For*—The koyan equals 533½ lbs.  
(40 pikuls)

*Read*—The koyan equals 5,333½ lbs.  
(40 pikuls)

During the War and for some years after notes of the denominations of 25 cents and 10 cents were issued. These notes are no longer issued, but a fair quantity of them still remain in circulation.

In 1906 the Currency Commissioners were empowered to issue notes in exchange for gold at the rate of \$60 for £7, and by Order of the King in Council gold sovereigns were declared legal tender at this rate, the sterling value of the dollar being thus fixed at 2s. 4d. Gold, however, has never been in active circulation in the Colony.

The Currency Commissioners may accept sterling in London for dollars issued by them in Singapore at a fixed rate of 2s. 4 $\frac{3}{4}$ d. to the dollar, and, *vice versa*, may receive dollars in Singapore in exchange for sterling sold in London at the rate of 2s. 3 $\frac{3}{4}$ d. to the dollar. The exchange fluctuations in the value of the dollar may therefore vary between these two limits.

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HIS MAJESTY THE KING was graciously pleased to appoint His Excellency Sir L. N. GUILLEMARD, K.C.B., K.C.M.G., a Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George on the occasion of the New Year Honours. The Birthday Honours list included the names of Mr. HAYES MARRIOTT, C.M.G., and Mr. SONG ONG SIANG, V.D., who were created Knight Commander and Commander respectively of the Most Excellent Order of the British Empire (Civil Division).

H. E. Sir LAURENCE GUILLEMARD left the Colony on 6th May, 1927, from which date Mr. W. PEEL, C.M.G., acted as Officer Administering the Government, pending the arrival of H. E. Sir HUGH CLIFFORD, M.C.S., G.C.M.G., G.B.E, who landed at Singapore on 3rd June, 1927.

Mr. HAYES MARRIOTT went on leave on 25th March, 1927, from which date Mr. G. HEMMANT acted as Colonial

Secretary pending the arrival of Mr. E. C. H. WOLFF, C.M.G., on 8th April, 1927. Mr. WOLFF, continued to act until 22nd October, 1927, when Sir HAYES MARRIOTT resumed duty.

## II.—Finance

The revenue for the year 1927 amounted to \$37,602,081, exceeding the estimate by \$2,512,037, whilst the expenditure was \$39,253,272, being \$696,694 less than the estimate.

The revenue was \$1,136,868 more than that of 1926, while expenditure was more than the 1926 figure by \$2,297,632. The excess of expenditure over revenue was \$1,651,191 as compared with \$490,427 in 1926.

The actual figures for 1926 and 1927 are as follows:—

### (i).—REVENUE

—	1926	1927	Increase	Decrease
	\$	\$	\$	\$
1. Port, Harbour, Wharf and Light Dues ...	2,715	2,519	...	196
2. Licences, Excise and Internal Revenue not otherwise classified ...	27,682,559	27,954,663	272,104	...
3. Fees of Court or Office, Payments for Specific Services and Reimbursements in Aid ...	1,191,514	1,246,494	54,980	...
4. Posts and Telegraphs ...	2,120,394	2,224,838	104,444	...
5. Rents on Govt. Property ...	1,662,692	1,733,768	91,076	...
6. Interest ...	2,737,371	2,976,328	238,957	...
7. Miscellaneous Receipts ...	544,198	588,392	44,194	...
	35,941,443	36,747,002	805,755	196
8. Land Sales ...	523,770	855,079	331,309	...
TOTAL ...	36,465,213	37,602,081	1,137,064	196
	Net	Increase ...	\$1,136,868	

There was an increase of \$1,486,380 in opium revenue, and the total receipts under "Licences" exceeded the 1926 figure by two hundred and seventy-two thousand.

The Estate Duty collected in 1927 amounted to \$1,668,217 as against \$2,420,759 in 1926.

(ii).—EXPENDITURE

	1926	1927	Increase	Decrease
	\$	\$	\$	\$
1. Charge on account of the Public Debt ...	37,083	37,083	...	...
2. Pensions, Retired Allowances, Gratuities, etc. ...	1,422,411	1,538,491	116,080	...
3. Charitable Allowances ...	20,175	20,283	108	...
4. The Governor ...	155,337	157,507	2,170	...
5. Civil Service ...	667,060	669,635	2,575	...
6. General Clerical Service ...	...	869,531	869,531	...
7. Colonial Secretary, Resident Councillors and Resident	199,150	129,041	...	70,109
8. Secretary to High Commissioner ...	21,507	13,884	...	7,623
9. Agricultural Department ...	35,256	42,279	7,023	...
10. Audit ...	103,623	24,103	...	79,520
11. Audit, External ...	11,501	...	...	11,501
12. Chinese and Indian Immigrants' Protection ...	90,819	83,824	...	6,995
13. Co-operative Societies ...	...	19,812	19,812	...
14. Ecclesiastical ...	25,234	25,059	...	175
15. Education ...	1,106,086	1,228,038	121,952	...
16. Fisheries ...	218,841	147,284	...	71,557
17. Forests ...	27,078	34,370	7,292	...
18. Gardens, Botanical ...	97,310	100,863	3,553	...
19. Imports, Exports and Statistics ...	92,027	35,771	...	56,256
20. Land and District Offices ...	354,494	237,861	...	116,633
21. Legal ...	422,269	351,128	...	71,141
22. Marine ...	639,753	598,168	...	41,585
23. Marine Surveys ...	76,065	69,755	...	6,310
24. Medical ...	462,081	401,677	...	60,404
25. Medical, Health Branch ...	511,289	604,635	93,346	...
26. Medical, Social Hygiene Branch ...	...	92,488	92,488	...
27. Medical, Hospitals and Dispensaries ...	1,973,157	2,066,543	93,386	...
28. Military Expenditure—				
I. Defence Contribution	3,630,388	5,303,211	1,672,823	...
II. Local Forces ...	335,081	390,803	55,722	...
29. Miscellaneous Services ...	10,323,772	9,157,397	...	1,166,375
30. Monopolies ...	1,970,547	1,686,966	...	283,581
31. Museum and Library, Raffles ...	59,877	55,730	...	4,147
32. Police ...	2,501,737	2,498,068	...	3,669
33. Political Intelligence Bureau	3,870	18,795	14,925	...
34. Post Office ...	1,486,783	1,681,747	194,964	...
35. Printing Office ...	205,603	180,262	...	25,341
36. Prisons ...	363,229	412,304	49,075	...
37. Public Works Department...	509,123	465,566	...	43,557
38. Public Works, Recurrent Expenditure ...	701,612	773,675	72,063	...
39. Public Works, Extraordinary ...	5,145,540	6,184,886	1,039,346	...
40. Survey Department ...	415,664	427,003	11,339	...
41. Transport ...	256,461	253,470	...	2,991
42. Treasury ...	215,772	100,999	...	114,773
43. Veterinary ...	60,975	63,277	2,302	...
<b>TOTAL</b> ...	<b>36,955,640</b>	<b>39,253,272</b>	<b>4,541,875</b>	<b>2,244,243</b>
	<b>Net</b>	<b>Increase ...</b>	<b>82,297,632</b>	

The increase under Pensions, Retired Allowances, Gratuities, etc. is due to commutation of pensions under the Pensions (Gratuities) Ordinance 1926.

The increase under Education is due to additional appointments of Teachers.

The larger Defence Contribution is attributable to the enhanced cost of the Garrison.

Co-operative Societies and Medical, Social Hygiene Branch, are new items of expenditure.

The increase under Post Office is caused by an extension of the provision for Telephone Switchboard and Reconstruction of Pole Lines.

The increase under Public Works Department Extraordinary is due to erection of new buildings and other works in Singapore, Malacca and Dindings.

The principal items on which expenditure fell short of the estimate were:—

				\$
Civil Service	...	...	...	57,626
Audit, External	...	...	...	76,012
Education	...	...	...	200,467
Medical, Hospitals and Dispensaries	...			278,829
Monopolies	...	...	...	888,255
Police	...	...	...	289,792
Post Office	...	...	...	153,505
Public Works, Recurrent Expenditure	...			51,040
Public Works Extraordinary			...	1,348,076
Survey Department	...	...	...	90,566

An excess of more than \$1 million over the estimate for Miscellaneous Services was mainly due to the payment of \$457,985 to the Singapore Town Improvement Scheme and of \$314,700 for the purchase of and acquisition of land and to various other unforeseen services.

The following table shows the Colony's expenditure, excluding Defence Contribution, for the last eight years and the portion of it which has been spent on Public Works Extraordinary:—

			<i>Total Expenditure</i>	<i>Public Works Extraordinary</i>
			—	—
			\$	\$
1920	...	...	35,452,052	1,465,890
1921	...	...	29,807,490	3,531,938
1922	...	...	20,969,940	2,266,281
1923	...	...	22,860,635	2,519,954
1924	...	...	23,150,128	4,223,846
1925	...	...	54,314,078	5,142,549
1926	...	...	33,325,253	5,145,540
1927	...	...	33,950,061	6,184,886

The abnormal expenditure in 1920 was due to the Straits Settlements contribution to Imperial War Funds, \$7,186,000, and to the Colony's share on the loss on the sale of Rice, \$9,460,000. The 1925 figure is due to the amount set aside in respect of the Opium Revenue Replacement Fund.

## (iii).—STATEMENT OF ASSETS AND LIABILITIES

The Assets and Liabilities of the Colony on the 31st December, 1927, were as follows :—

<i>Liabilities</i>	<i>\$</i>	<i>Assets</i>	<i>\$</i>
Deposits—		Investments—	
Opium Revenue Replacement Reserve Fund ... \$40,239,616		Colony ... \$22,137,696	
Other Deposits ... 12,169,123		Opium Revenue Replacement Reserve Fund ... 40,155,519	
	52,408,739	Other investments ... 5,066,648	67,359,863
Drafts and Remittances ... 35,192		Advances ... .. 799,077	
Suspense ... 917,682		Imprests ... .. 87,585	
Investments Depreciation Account ... .. 25,000		Cash in Transit ... .. 78,349	
Loans :—		Loans :—	
Straits Settlements 7% Loan 1921-1926 ... .. 200		Municipalities ... 18,936,383	
Surplus—		Kelantan Government ... 4,080,684	
Reserved for specific purposes (a) ... \$14,006,414		Trengganu Government ... 1,450,000	
Unreserved ... 46,937,296		Singapore Harbour Board ... 4,940,816	
	60,743,710	Penang Harbour Board ... 1,758,525	
		Ho Hong Steamship Co. ... 100,000	
		Singapore Cricket Club ... 29,255	
		Brunei Government ... 12,000	
		Sailors' Institute ... 155,000	
		Stadium Association ... 25,000	
		War Service Land Grants Scheme ... 189,783	
		Singapore Improvement Trust ... 250,000	
		Indian Agency Account ... 101,673	
		Cash ... .. 13,976,327	
TOTAL ... 114,330,523		TOTAL ... 114,330,523	

## (a) Loans :—

Loans to Municipalities ... ..	\$1,104,857
Loan to Government of Trengganu ... ..	550,000
Loan to Penang Harbour Board ... ..	858,000
War Service Land Grants Scheme ... ..	101,267
	<u>\$2,614,124</u>

## (a) Commitments of Expenditure :—

For completion of New Post Office and New General Hospital ... ..	\$1,085,627
Raffles College Buildings ... ..	487,046
Malacca Water Supply ... ..	106,256
Share of Cost to Penang Water Supply ... ..	300,000
Development of Penang Hill ... ..	437,449
Singapore Town Improvement Scheme ... ..	8,306,436
New Mental Hospital ... ..	669,476
	<u>\$11,392,290</u>
TOTAL ...	<u>\$14,006,414</u>

## (iv).—PUBLIC DEBT

The indebtedness of the Colony in respect of the Loan raised by the issue of  $3\frac{1}{2}$  per cent Straits Settlements Inscribed Stock under the provisions of Ordinance No. 98 (Loan) amounted, on the 31st December, 1927, to £6,913,352, of which the equivalent in local currency is \$59,257,302.

The expenditure upon services in respect of which this loan was raised stands as follows:—

	\$
Singapore Harbour Board ...	47,720,526
Penang Harbour Board ...	2,093,974
Municipal Commissioners, Singapore ...	4,484,460
Municipal Commissioners, Penang ...	1,250,000
Government Harbour Works ...	320,137
Total ...	<u>\$55,869,097</u>
Loan Expenses and Cost of Conversion (1907 Loan) less interest received ...	<u>3,388,205</u>
	<u>\$59,257,302</u>

The charge on account of interest on, and expenses of, this loan was \$2,079,973 in 1927. This charge is, however, borne by the Singapore Harbour Board and the other bodies to whom portions of the loan have been allotted. The value of the investments of the sinking fund of this loan on 31st December, 1927, was approximately \$8,560,000.

The indebtedness of the Colony under the  $5\frac{1}{2}$  per cent War Loan 1918 stands at \$28,655,700, under the  $5\frac{1}{2}$  per cent Conversion Loan 1919 at \$36,718,200, and under the Straits Settlements and the Federated Malay States Victory Loan 1920 at \$15,074,300. The principal of, and the major portion of the interest on, all these three loans is payable by His Majesty's Government.

The Sterling Loan issued under the provisions of Ordinance No. 182 (Straits Settlements Loan No. 11) amounted to \$80,185,714 (£9,355,000). The whole of the proceeds has been handed over to the Federated Malay States Government, which has legislated for the payment of the interest and charges in connection with the loan and of sinking fund contributions to extinguish it.



## (v).—EXCHANGE

The following Banks had Establishments in the Colony during the year 1927:—

- The Chartered Bank of India, Australia and China
- „ Hongkong and Shanghai Banking Corporation
- „ Mercantile Bank of India, Limited
- „ P. & O. Banking Corporation, Limited
- Messrs. Thomas Cook & Son (Bankers), Limited
- The Netherlands Trading Society (Nederlandsche Handel Maatschappij)
- „ Banque de l'Indo Chine
- „ National City Bank of New York
- „ Netherlands India Commercial Bank (Nederlandsch Indische Handelsbank)
- „ Sze Hai Tong Banking and Insurance Company, Limited
- „ Bank of Taiwan, Limited
- „ Yokohama Specie Bank, Limited
- „ Chinese Commercial Bank, Limited
- „ Ho Hong Bank, Limited
- „ China and Southern Bank, Limited
- „ Oversea Chinese Bank, Limited
- „ Lee Wah Bank, Limited
- „ Kwong Lee Banking Corporation

During the year under report the sterling demand rate (bank opening rates only) ranged between  $2/4$  and  $2/3\frac{5}{8}$ .

## (vi).—CURRENCY

No change was made in the Currency Legislation during the year.

Excluding subsidiary coins, the currency of the Colony in circulation in the currency area at the end of the year consisted of \$117,805,414.70 in currency notes and \$6,526,869 in dollars and half-dollars, while there were still in circulation bank notes issued by the Hongkong and Shanghai Banking Corporation and the Chartered Bank of India, Australia and China to the value of \$139,585, as compared with \$140,165 at the end of 1926.

At the end of 1926 the Currency Notes in circulation amounted in value to \$163,279,713.70. There was a demand by the public for Sterling during the months of February, March, April, May, June, August and September, 1927 and the consequent contraction in the Currency during those months amounted to \$45,965,650. In the month of December a slight demand for Currency resulted in the issue of \$425,700, thus making a net contraction over the year of \$45,539,950. The value of the Currency Notes in circulation at the end of 1927 stood at \$117,805,414.70.

The liquid portion held by the Commissioners at the end of the year against the note circulation amounted to \$65,419,652.40, consisting of £328,251 in gold, \$15,753,158.28 in silver and \$1,687,371.76 on deposit with the Government held locally and £73,330 in gold and £5,195,983.56 in sterling and short dated investments in London.

The investments held by the Commissioners on account of the Currency Guarantee Fund were worth, at the average mean prices at the end of the year, \$98,445,121.70; the cost price of those investments having been \$101,920,586.53.

The Currency Guarantee Fund at the end of the year was worth \$163,928,460.02 (liquid portion \$65,419,652.40, investment portion \$98,445,121.70, and cash balance of the Currency Commissioners Income Account \$63,685.92). The excess value of the Fund over the total note circulation at the end of the year was \$46,123,045.32, as compared with an excess of \$38,951,784.43 at the end of 1926.

There was a net issue by the Treasury of \$1,099,468 in subsidiary silver coins during the year, and a net decrease of \$799,288 in the circulation of ten cent notes.

Excluding the amount held by the Treasury \$10,664,454.95 was in circulation at the end of the year in subsidiary silver and \$1,124,307.70 in current notes of values less than \$1.

The value of notes below \$1 in circulation at the end of 1925 was \$2,092,754.70 and at the end of 1926 \$1,923,607.70.

The number of notes destroyed during the year was 26,697,813, as against 31,148,533 in 1926.

Of the notes destroyed 8,453,270 were 10 cent notes and 11,489,020 were \$1 notes.

At the beginning of the year the total number of notes awaiting destruction was 626,417, and a further 26,581,722 were cancelled during the year, making a total of 27,208,139 for destruction. The total number destroyed was 26,697,813 and the balance awaiting destruction at the end of the year was consequently 510,326.

## (vii) ENEMY PROPERTY

During the year a sum of \$31,626.08 was transferred to the Clearing Office (Enemy Debts) London. The total proceeds of liquidation of Enemy Property so transferred, to the end of 1927, amounted to \$12,791,135.41. On 31st December, 1927, \$898,736.11 was still held by the Crown Agents for the Colonies and \$110,398 by the Local Custodian in investments, while the latter also had a cash balance of \$14,647.13, making a total of \$1,023,781.24.

## LOCAL CLEARING OFFICE

The position at the end of 1927 in regard to the different classes of claims was as follows:—

*German claims.*—The total value of all claims registered was \$1,894,021.59. Claims for \$1,632,248.33 have been withdrawn and claims for \$199,095.38 admitted. Claims to the extent of \$53,239.34 were under reference to the Mixed Arbitral Tribunal and in addition there were claims amounting to \$9,438.54 still undecided.

The total amount due on the admitted claims referred to above together with interest \$35,224.54 comes to \$234,319.92. Of this \$186,682.51 has been recovered. Of the outstanding balance of \$47,637.41 about \$21,000 will most probably have to be written off as irrecoverable and the balance of \$26,000 is expected to be paid up in the near future.

The sum of \$7,120.70 was collected from British Nationals during the year on account of admitted debts and interest.

*British claims.*—The total value of the claims registered remained at \$217,366.40. Of this claims to the value of \$46,964.02 were withdrawn during the year making the total withdrawn \$153,407.50. The admissions remained the same as in the previous year *viz*: \$40,142.01. There was only one claim, of the value of \$13,890.64, under reference to the Mixed Arbitral Tribunal at the end of the year and in addition there was one claim amounting to \$9,926.25 unsettled. The sum of \$95,695.70 was transferred to the Clearing Office (Enemy Debts) London during the year.

*Claims against Austrian and Hungarian Nationals.*

During the year, dividends amounting to 3/ in the £ on the admitted claims were credited and distributed making the total of the dividends so distributed 12/ in the £.

*Funds in the hands of the Local Controller.*—These amounted to \$37,000 on Fixed Deposit and \$4,401.08 cash.

### III.—Production

#### (a) AGRICULTURE

*Rubber*.—At the beginning of the year Standard Smoked Sheet was sold at 64½ cents per lb. The price appreciated to about 70 cents per lb. in March and remained around that figure until June when it began to decline. This downward tendency continued through the succeeding months until in September a figure of about 57 cents per lb. was reached. Thereafter the price rose steadily to about 70 cents per lb., at which level the business for the year terminated. The exportable allowances of standard production under the rubber restriction scheme were as follows, January 80 per cent, February to April 70 per cent, May to December 60 per cent. Measures were taken towards the end of the year to give greater efficiency to the operation of the restriction scheme.

The lower average price did not appreciably affect the standard of upkeep previously maintained on large plantations; neither did it cause any marked deterioration in the condition of the majority of small holdings, although there is still room for improvement in the latter in such matters as plant sanitation and methods of tapping. Routine instruction on these points is being continued.

Diseases and pests of rubber were not more prevalent than usual and received regular attention from the Inspecting Officers throughout the year. Mouldy Rot Disease (*Sphaeronema fimbriatum*) continued to spread slowly along the eastern boundary between Province Wellesley and Kedah, chiefly amongst small holdings where tapping is bad and sanitation indifferent, and a similar kind of outbreak was noted in Penang Island. Both affected areas are receiving attention. In Malacca and Singapore Island the same disease was at times in evidence, particularly during wet weather, and regular control measures had to be enforced. A bark rot, in appearance somewhat similar to Mouldy Rot, was discovered in Penang Island. Microscopic examination of specimens failed to elicit any trace of the Mouldy Rot fungus; but the methods found efficacious in controlling the latter were utilised with effect in dealing with this attack. Pink Disease (*Corticium salmonicolor*) continued to be fairly widely distributed through the Northern District of Province Wellesley, but did not appear anywhere to have reached serious proportions. This disease and Black Stripe (*Phytophthora sp.*) are still present in Malacca, though in negligible quantity.

*Coconuts.*--The market for copra, which at the end of 1926 closed at \$10.10 per picul (133½ lb.), rose in January to \$11. The price during 1927 showed no great variation until October, when it rose to \$11.53 per picul, but declined at the end of the year to \$11.50 per picul. The average price throughout the year was \$11.17 per picul, as compared with \$11.80, \$11.95 and \$12.12 in the years 1926, 1925 and 1924 respectively.

In Penang and Province Wellesley, and in fact generally in Malaya, the year's coconut crop has on the whole been poor, the nuts themselves being small as well as comparatively few in number. This may have been due to the long drought in 1926, which may have affected nuts due to mature about twelve months later.

Records of yields of individual palms were continued for the seventh consecutive year in Province Wellesley. These have shown clearly that individual palms differ greatly from one another in their average annual yields, which have ranged from 50 to 150 nuts a palm during this period. To select the palms yielding the most copra per annum it is necessary to correlate the average annual yield of nuts from each individual tree with the average weight of copra produced from one of its nuts. This work is now in progress. The oil content of the copra obtained from each tree has also to be determined. The records so far obtained indicate clearly the valuable increase in the yield of copra per acre which may ultimately be expected as a result of selection.

The reputed inferiority of Straits copra as compared with that produced in Ceylon and Malabar appears to be a matter of importance to the local coconut industry and the matter is being investigated. Climatic conditions are apparently not wholly responsible and it is hoped that the local species can eventually be improved. Analyses of a number of samples of fresh and stored copra and a study of local methods of preparation are being made, in order to determine the range of variation in the oil content of the Straits product. It is anticipated that the results of this investigation may promote the marketing of copra on its oil and moisture content.

The Black Coconut Beetle (*Oryctes rhinoceros*) has been kept well under control throughout the year in the Province, Malacca and Singapore, as has also the Red Stripe Weevil (*Rhyncophorus schach*). The latter was reported in some quantity during the year from the Dindings, where it attacked particularly palms which had been damaged

previously by other agencies. An out-break of Skipper Caterpillars (*Hidari irava*) was also noted in the Dindings, but was promptly controlled.

*Padi (Rice).*—The total area planted with wet padi in the Straits Settlements during the season 1926 - 27 is estimated at 69,919 acres, yielding 19,072,956 gantangs (gallons), as compared with 71,911 acres and a crop of 20,209,720 gantangs for the season 1925 - 26.

In Province Wellesley the yield from the 1926 - 27 crop was much below average owing largely to unfavourable weather conditions during harvest. In Penang Island, with its better conditions of drainage and irrigation, the crop was fairly satisfactory. In Malacca the crop was good, although in some localities it was damaged by floods. Seed padi, amounting to 62,908 gantangs, from both the Province and Malacca was distributed in Perak and Pahang for use in the areas where the total crop was ruined by the unprecedented floods which occurred at the end of 1926.

In some areas of Province Wellesley and Penang planting operations for the 1927 - 28 season were completed early; but in others, notably in the Southern District of the Province, planting was very late owing to lack of water. Crop prospects are far from favourable in these latter areas, a further set-back having been sustained owing to a period of drought lasting from about the middle of November to the end of the year. Little or no damage was done by this drought to those areas in which planting was early. Conditions in the Dindings are reported as favourable. In Malacca the padi planted during the year is on the whole well advanced in growth and promises a good average crop.

In Malacca during the 1927 - 28 season some damage was done to nurseries by caterpillars of *Nymphula depunctalis*; but, apart from this attack, Malacca has remained singularly free from insect and fungoid pests. In the Province species of *Nymphula* and *Spodoptera* did severe damage to nurseries in the Northern District; stem borers were subsequently responsible for some damage, particularly in the late planted areas where the plants had received a material set-back owing to the drought at the end of the year. The Fulgorid leaf-hopper (*Sogata pallescens*), which did so much damage in the season 1925 - 26, reappeared in the first half of December. The pest was not so widespread as on the previous occasion, but did considerable damage to a few late-planted areas. Both in Malacca and the

Province rats have continued to be the major pest of padi and, in view of the extensive damage done by them throughout the Province in previous seasons, special provision was made for carrying out an intensive Rat Campaign there during the last quarter of the year. This followed the lines of the campaign conducted regularly during the last three years in Krian. By its means approximately 100,000 rats were destroyed at a cost of \$1,600.89 and damage from this cause in Province Wellesley was considerably diminished.

At the Pulau Gadong Experiment Station in Malacca rats again caused considerable damage during the 1926-27 season. In spite of the various methods used to destroy them, they seriously reduced the yields and rendered the records of several experiments unreliable, though the important pure line selection rows were less damaged than other parts of the Station. Nurseries at this Station were also attacked during the 1927-28 season by Caterpillars of the *Nymphula depunctalis* variety; but control measures were promptly instituted and the plants rapidly recovered. Later, very considerable damage was again done by rats, several plots in the Station being almost completely destroyed. Unfortunately, this Station seems peculiarly liable to periodical invasions of rats in such numbers that the usual methods of destruction are of little avail.

At Pekan Darat Padi Test Station in Province Wellesley recorded yields in both the manurial and varietal tests were very unreliable in the 1926-27 season, owing to the wet weather experienced during harvest. During the 1927-28 season dry weather has adversely affected some plots of the Station more than others, so that results are again liable to be unsatisfactory.

A comprehensive survey of padi soils in Malaya is in progress with a view to ascertaining the soil factors affecting fertility. Samples and estimates of yields are being obtained from all over the country. Up to the end of the year 103 samples, chiefly from Malacca, had been received. The work has not yet progressed sufficiently to enable correlations to be established between yield and any soil factor. One observation of importance has, however, emerged, namely that the presence of a medium, or even high, percentage of sand in the soil does not necessarily result in low yield. Great caution must, therefore, be used in condemning any proposed padi area on the score of a high ratio of sand to clay.

*Fruit.*—In Malacca a heavy crop of fruit was nearing harvest at the end of the year. In Province Wellesley and Penang the fruit crop during 1927 was almost a complete failure.

*Soils.*—In addition to the work on padi soils mentioned above, a thorough study of Malayan soils in general has been begun. No systematic investigations of soil problems in Malaya, or indeed in the majority of tropical countries, have hitherto been carried out. Reliable information concerning soils in the tropics, comparable with that available in respect of soils in temperate countries, is now generally regarded as of primary importance to the development of tropical agriculture throughout the Empire, more especially because it is as yet very uncertain to what extent knowledge of soils gained in temperate countries will apply under tropical conditions. The first necessity appeared to be to establish what soil types exist in Malaya and what relation these types bear to the underlying parent material. A satisfactory commencement has been made in the study of this problem.

*Water Hyacinth (Eichhornia crassipes).*—In Province Wellesley excellent progress was made in clearing up rivers previously infested with Water Hyacinth. Towards the opening of the padi season special attention was paid to streams directly affecting padi growing areas and large quantities of the weed were removed and destroyed.

*Agricultural Shows.*—In Penang a very successful Agri-Horticultural Show was held at Balik Pulau during the Easter holidays. In Malacca the Annual Show was held in July, and was again a success, the exhibits being generally of better quality than those shown in previous years.

*School Gardens.*—Steady improvement is to be recorded both in Malacca and Penang Island. In the latter many school gardens are surprisingly good and show signs of hard work and great care. Most of those on the mainland in Province Wellesley are poor in comparison.

*Agricultural Research Conference.*—Two representatives of the local Department of Agriculture, the Secretary for Agriculture, Mr. A. S. HAYNES and the Mycologist, Mr. A. SHARPLES, attended the Agricultural Research Conference convened by the Secretary of State for the Colonies in London during October and November.



**(b) FORESTRY**

The only alteration to the area of reserved forests was the excision of 1 rood 16 poles from the Government Hill Reserve in the Island of Penang and the total area of reserved forests therefore remains approximately the same as in 1926, namely 111,477 acres, equivalent to 11.55% of the total area of the Colony. A Sub-Assistant Conservator of Forests was appointed for Singapore early in the year and worked directly under the Conservator of Forests, the Personal Assistant acting as Deputy Conservator of Forests. It was also decided to appoint a Sub-Assistant Conservator of Forests at Lumut.

During the year 583 acres at Seletar Reserve, 332½ acres at Changi Reserve, 639 acres at Pandan Reserve and 100 acres at Bukit Timah Reserve were allotted to squatters on temporary permits for the cultivation of vegetables. All that part of Changi Forest Reserve, north of a line running directly east from the mouth of Sungei Selerang, was handed over to the Military Authorities for the Naval Base.

The working schemes of the Malacca and Dindings forests are still under consideration..

Revenue and expenditure were \$52,763 and \$54,998 respectively, as compared with \$58,259 and \$53,400 in 1926, expenditure in both cases excluding the cost of temporary allowances. There was therefore a deficit of \$2,235 as compared with a surplus of \$4,859 in 1926. Revenue rose in Singapore and the Dindings and fell in Penang and Province Wellesley and Malacca, where the large decrease was due to the extraction of Class I trees from the Reserves being stopped.

The outturn of timber was 9,677 tons, and of fuel and charcoal 27,241 tons, as compared with 10,819 and 35,870 tons in the previous year.

Minor forest produce yielded a revenue of \$4,363, as compared with \$3,804 in 1926.

One hundred and nineteen cases of breaches of the forest law were reported and in 13 of these offenders were undetected. Fines inflicted in court amounted to \$1,000 and compensation to the amount of \$125 was awarded for damage to the forests.

The Forest Rules were revised during the year.

## (c) FISHERIES

The testing of the seas about Malaya with the otter trawl was conducted throughout the year by the Government Trawler, the S. T. "*Tongkol*". The experiments tended to show generally that, while some grounds are better than others, fish can be caught in average weather to the extent of about 70 to 90 lbs. per fishing hour almost anywhere on the immense continental plateau about the Peninsula and that, unless some means of grouping the fish more together could be discovered, trawling would not prove a commercial success.

The local fisheries experienced a normal year, though a general fall in price was experienced. The most marked features were the continued increase (about 25 per cent as compared with 1926) in the number of Japanese fishermen and the success of the method of fishing known as "*muro ami*", which is peculiar to them. This method of fishing supplied the Singapore markets with no less than one-third of the fish sold there during the year and contributed largely as well to the market supplies of Penang and elsewhere. The "*Delah*" (the bream *Caesio*) is the fish mainly caught by this method. Before 1922, the year in which "*muro ami*" was introduced into Malaya, this fish was little seen in the local markets.

Over 5,000 "*Sepat Siam*" (*Tricopedus leeri*) were distributed and sold throughout the Peninsula during the year. This kind of fish grows with great rapidity in suitable rice-fields and in many places gives a handsome return for little or no attention beyond that required for the cultivation of the rice itself.

A number of carp and fresh-water culture ponds were built in Singapore for the purpose of investigating the Chinese method of carp culture and for experimental fish pond culture. The ponds had not sweetened enough for use by the end of the year.

## (d) MINING

Mining operations in the Colony are confined to the Settlement of Malacca.

Two Leases under Ordinance No. 69 (Foreshores) with mining Licences attached were issued during the year.

There are still numerous pieces of Land held under Approved Applications for Mining Lease in the neighbourhood of Chin Chin. The Revenue from Tin was \$11,507.57 as against \$313.64 of year previous.

(e) PRINCIPAL EXPORTS  
*Comparative Return of Exports of Principal Articles from the Straits Settlements for the Years 1923 to 1927*

	How Stated	1923		1924		1925		1926		1927	
		Quantities	Values	Quantities	Values	Quantities	Values	Quantities	Values	Quantities	Values
Para Rubber ...	Tons	204,811	227,893,117	210,135	212,854,666	248,138	568,523,333	272,546	403,314,301	270,749	373,172,359
Tin ...	"	69,895	119,716,725	80,693	169,177,028	79,094	175,228,751	76,340	185,541,301	83,778	266,580,997
Rice ...	"	341,202	38,182,165	326,836	41,941,832	405,412	51,747,890	461,821	61,531,459	467,106	58,945,805
Motor Spirit ...	"	* 26,145,853	23,878,486	70,055	19,313,617	201,413	56,160,960	224,468	62,447,583	221,049	53,674,511
Copra ...	"	150,466	28,649,201	151,460	31,290,259	142,833	30,063,607	168,083	33,653,067	125,721	23,615,545
Cotton Piece Goods ...	Yards	† 4,027,355	20,988,597	79,906,401	20,817,607	101,667,282	27,852,014	94,372,564	25,717,714	92,778,758	24,120,078
Cigarettes ...	lbs.	8,884,841	15,899,624	9,881,127	16,064,993	10,925,283	18,979,440	8,956,879	18,998,973	7,621,542	17,252,474
Pepper ...	Tons	18,572	6,001,985	19,703	8,332,677	15,820	10,186,696	14,584	13,385,970	13,642	16,871,151
Cotton Sarongs ...	Nos.	6,385,980	8,371,478	6,413,742	9,040,466	7,110,022	10,416,709	6,977,555	10,265,335	7,211,417	9,565,185
Milk ...	Cases	332,364	4,674,402	373,654	4,974,048	491,453	6,325,039	616,105	7,750,587	526,310	6,255,017

\* The quantity shown for motor spirit in 1923 is in Gallons

† The quantity shown for cotton piece goods in 1923 is in Pieces

#### IV.—Trade and Economics

The value of the aggregate trade of the Colony in merchandise recorded during 1927 amounted to 269 million Sterling, a decrease of 26 million on the 1926 total or about 9%. Of this decrease 90% is accounted for by the difference in the value of the trade in rubber, the aggregate value of which was 199 million Dollars, or about 23 million Sterling less than in 1926.

The total quantity of rubber exported was about 271,000 tons, valued at 373 million Dollars. This is a decrease of nearly 2,000 tons in quantity and of 120 million Dollars in value as compared with the 1926 figures.

The quantity of rubber imported was about 285,000 tons, valued at about 311 million Dollars. This is an increase of about 5,000 tons in weight and a decrease of about 79 million Dollars in value. The rubber imported exceeded that exported by 14,000 tons, but it should be noted that the declared weight of rubber imported includes moisture and impurities, while that of rubber exported is the dry weight. The value of the imported rubber was 62 million Dollars less than that of the rubber exported.

The exports of tin increased to about 84,000 tons from 76,000 tons in 1926. The increase in value was 21 million Dollars.

The following figures show the value of the Colony's trade for the last six years, the value of Coin and Bullion and of the trade between the Settlements being excluded:—

Year	IMPORTS EXPORTS of Merchandise		IMPORTS EXPORTS Comparison with preceding year	
	£	£	£	£
		(in thousands)		
1922 ...	66,692	62,060	+ 901	+ 5,922
1923 ...	89,002	82,590	+ 22,310	+ 20,530
1924 ...	98,915	89,430	+ 9,913	+ 6,840
1925 ...	152,338	143,137	+ 53,423	+ 53,707
1926 ...	153,945	140,966	+ 1,607	- 2,171
1927 ...	143,287	125,784	- 10,658	- 15,182

The value of the inter-Settlement trade, including treasure, for the last six years was as follows:—

Year	IMPORTS	EXPORTS	IMPORTS		EXPORTS	
			Comparison with preceding year			
			(in thousands)			
	£	£	£		£	
1922 ...	5,148	5,078	-	1,756	-	1,809
1923 ...	5,728	5,607	+	580	+	529
1924 ...	5,125	5,049	-	603	-	558
1925 ...	7,584	7,665	+	2,459	+	2,616
1926 ...	8,133	8,042	+	549	+	377
1927 ...	6,912	7,004	-	1,221	-	1,038

*Bullion and Specie.*—The following are the figures for the last four years:—

Four years:		<i>Imports</i>	<i>Exports</i>
		—	—
		(in thousands)	
		£	£
1924	...	... 1,607	561
1925	...	... 4,732	1,423
1926	...	... 5,450	1,729
1927	...	... 3,225	1,097

The following figures show the trade according to classes:—

	IMPORTS				EXPORTS			
	1924	1925	1926	1927	1924	1925	1926	1927
	(In thousands)							
	£	£	£	£	£	£	£	£
I. Live Animals, Foods, Drinks and Narcotics	28,348	32,412	35,581	35,493	21,412	24,031	26,524	25,193
II. Raw Materials	43,839	80,922	74,270	67,860	32,999	74,379	66,359	50,781
III. Manufactured and partly manufactured Articles	26,728	39,004	44,094	39,934	35,019	44,727	48,083	49,810
TOTAL	98,915	152,338	153,945	143,287	89,430	143,137	140,966	125,784

The following tables show the quantities and values of certain principal commodities imported and exported:—

### DETAILS OF CERTAIN ARTICLES IMPORTED

Articles	How Stated	1926		1927		INCREASE		DECREASE	
		Quantities	Values	Quantities	Values	Quantities	Values	Quantities	Values
			(000's)		(000's)		(000's)		(000's)
Para Rubber	Tons.	279,641	389,951	284,567	\$ 311,319	4,926	\$	...	78,632
Tin Ore	"	93,888	160,715	110,963	193,223	17,075	32,508	...	...
Rice	"	679,293	87,813	735,265	90,249	55,972	2,436	...	...
Milk, Condensed and Sterilized	Cases	1,136,393	14,166	1,083,015	12,735	...	...	53,378	1,431
Sugar	Tons.	108,827	15,168	110,486	15,340	1,659	172	...	...
Cigarettes	lbs.	11,092,078	23,463	10,055,209	22,895	...	...	1,036,869	568
Fish, Dried and Salted	Tons.	67,566	17,868	62,932	17,504	...	...	4,634	364
Arecanuts	"	58,202	13,914	43,920	8,278	...	...	14,282	5,636
Motor Spirit (Benzine)	"	255,853	70,503	250,626	60,217	...	...	5,227	10,286
Petroleum (Kerosene)	"	79,684	13,308	121,828	16,901	42,144	3,593	...	...
Sago	"	38,225	3,291	43,330	3,785	5,105	494	...	...
Cotton Piece Goods	Yards.	147,876,310	40,396	151,414,459	35,930	3,538,149	...	...	4,466
Sarongs	Nos.	12,310,809	17,304	10,674,133	14,130	...	...	1,636,676	3,174
Copra	Tons.	170,495	32,094	133,442	23,643	...	...	37,053	8,451
Pepper	"	14,357	12,228	11,920	15,033	...	2,805	2,437	...
Rattans	"	23,466	4,785	23,475	4,358	9	...	...	427
Coal	"	799,094	9,581	873,950	10,947	74,856	...	...	...
Machinery	Nos.	123,404	12,854	67,360	12,865	...	11	56,044	...

## DETAILS OF CERTAIN ARTICLES EXPORTED

Articles	How Stated	1926		1927		INCREASE		DECREASE	
		Quantities	Values	Quantities	Values	Quantities	Values	Quantities	Values
			(000's)		(000's)		(000's)		(000's)
Para Rubber	Tons.	272,546	\$ 493,314	270,749	\$ 373,172	...	\$	1,797	\$ 120,142
Tin	"	76,340	185,541	83,778	206,581	7,438	21,040	...	2,585
Rice	"	461,821	61,531	467,106	58,946	5,285	...	...	1,496
Milk, Condensed and Sterilized	Cases.	616,105	7,751	526,310	6,255	...	...	89,795	280
Sugar	Tons	56,208	8,248	55,809	7,968	...	...	309	1,747
Cigarettes	lbs.	8,956,879	18,999	7,621,542	17,252	...	...	1,335,337	906
Fish, Dried and Salted	Tons.	66,459	17,810	63,326	16,904	...	...	12,857	8,773
Arecanuts	"	62,885	17,248	50,028	10,351	...	...	...	...
Benzine (Motor Spirit)	"	224,468	62,448	221,049	53,675	...	...	...	...
Petroleum (Kerosene)	"	82,739	12,420	111,529	15,553	28,790	3,133	...	...
Sago	"	41,757	4,508	44,338	4,671	2,581	163	...	...
Cotton Piece Goods	Yards.	94,372,564	25,718	92,778,758	24,121	...	...	1,593,806	1,597
Sarongs	Nos.	6,977,595	10,265	7,211,417	9,565	233,862	...	...	700
Copra	Tons.	168,083	33,653	125,721	23,616	...	...	42,362	10,037
Pepper	"	14,584	13,386	13,642	16,871	...	3,485	942	...
Kattans	"	16,993	4,797	16,164	4,369	...	...	829	428
Preserved Pineapples	"	36,916	7,012	36,274	7,500	...	488	642	...
Rubber Latex	Gals.	28,331	84	59,918	148	31,587	64	...	...

Para Rubber was imported from the following countries in 1924, 1925, 1926 and 1927:—

	1924		1925		1926		1927	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
		(000's) \$		(000's) \$		(000's) \$		(000's) \$
Malay States ...	90,519	88,843	100,656	232,636	128,130	219,454	101,317	139,406
Netherlands Indies ...	93,113	61,797	138,870	195,881	132,986	141,587	157,837	139,286
Other Countries ...	15,411	14,501	20,061	41,736	18,525	28,910	25,413	32,627
<b>Total ...</b>	<b>199,043</b>	<b>165,141</b>	<b>259,587</b>	<b>470,253</b>	<b>279,641</b>	<b>389,951</b>	<b>284,567</b>	<b>311,319</b>

Para Rubber was exported to the following countries in 1924, 1925, 1926 and 1927:—

	1924		1925		1926		1927	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
		(000's) \$		(000's) \$		(000's) \$		(000's) \$
United Kingdom ...	14,020	14,755	20,540	54,170	34,260	64,262	28,349	41,558
United States of America ...	162,465	164,197	190,683	427,543	195,894	354,320	198,256	270,374
Other Countries ...	33,650	33,903	36,915	86,810	42,392	74,732	44,144	61,240
<b>Total ...</b>	<b>210,135</b>	<b>212,855</b>	<b>248,138</b>	<b>568,523</b>	<b>272,546</b>	<b>493,314</b>	<b>270,749</b>	<b>373,172</b>

Tin and Tin Ore were imported in 1924, 1925, 1926 and 1927 from the following countries:—

	1924		1925		1926		1927	
	Tin	Tin-ore	Tin	Tin-ore	Tin	Tin-ore	Tin	Tin-ore
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Malay States ...	7,092	54,352	7,310	56,280	5,547	57,009	3,838	68,718
Netherlands Indies ...	6	24,395	3	25,342	...	23,429	...	27,157
Siam ...	426	10,052	304	10,200	195	9,694	51	10,326
Other Countries ...	14	3,462	4	3,937	3	3,756	...	4,762
<b>Total ...</b>	<b>7,538</b>	<b>92,261</b>	<b>7,621</b>	<b>95,759</b>	<b>5,745</b>	<b>93,888</b>	<b>3,889</b>	<b>110,963</b>



The exports of Tin in 1924, 1925, 1926 and 1927 were as follows:—

—	1924		1925		1926		1927	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
		(000's) \$		(000's) \$		(000's) \$		(000's) \$
United Kingdom ...	16,335	33,964	13,970	30,815	11,101	26,785	9,453	22,986
United States of America ...	46,194	97,620	45,120	99,895	44,513	108,013	46,370	114,812
Other Countries ...	18,163	37,593	20,004	44,519	20,726	50,743	27,955	68,783
Total ...	80,692	169,177	79,094	175,229	76,340	185,541	83,778	206,581

The quantity of Para Rubber imported amounted to about 285,000 tons. Of this the Malay States furnished about 101 thousand tons valued at 140 million Dollars, a decrease of 27 thousand tons in amount and of 80 million Dollars in value as compared with the 1926 figures. The Dutch East Indies and other countries contributed about 183,000 tons, valued at 172 million Dollars, an increase of 32,000 tons and 2 million Dollars.

The Rubber exported to the United States of America amounted to about 198 thousand tons, valued at 270 million Dollars. This was 2,000 tons more than in 1926, but 84 million Dollars less was paid for it. The quantity sent to the United Kingdom was 28,000 tons, valued at 42 million Dollars, a decrease of 6,000 tons and 23 million Dollars. The total amount exported to other countries increased by 2,000 tons but decreased in value by 14 million Dollars.

The quantity of Tin Ore imported increased by 17,000 tons, while Tin decreased by about 1,800 tons.

The exports of Refined Tin increased in amount by 8,000 tons and in value by 21 million Dollars.

The imports of Cotton Piece Goods increased by  $3\frac{1}{2}$  million yards, but there was a decrease in value of about  $4\frac{1}{2}$  million Dollars. The re-exports of these goods decreased by over  $1\frac{1}{2}$  million yards.

Other imported articles, which shew an increase in value, are Rice, Kerosene, Pepper, Sugar and Coal. The value of Benzine, Arecanuts, Sarongs, Copra and Milk decreased.

The re-exports of the above articles were similarly affected.

The exports of canned pineapples decreased slightly in amount, namely by about 600 tons, but there was a small increase in value.

The following table shews the value of the merchandise imported from and exported to the United Kingdom, Australia, countries in the Continent of Europe, the United States of America, and Japan:—

	IMPORTS				EXPORTS			
	1924	1925	1926	1927	1924	1925	1926	1927
	(000's)							
	£	£	£	£	£	£	£	£
United Kingdom	9,050	12,346	13,338	12,346	8,457	12,700	13,130	10,181
Australia and New Zealand ...	1,620	1,990	1,679	1,770	1,236	3,077	4,705	4,654
Austria	...	...	2	67	...	...	...	...
Belgium	271	313	497	468	164	278	250	149
Czecho-Slovakia	...	...	...	39	...	...	...	...
Denmark	104	71	108	102	406	224	298	329
Fiume	...	1	...	...	...	...	1	1
France	705	848	1,388	1,056	3,202	4,339	3,797	3,464
Germany	610	923	1,454	1,464	1,274	2,764	1,797	1,635
Holland	582	895	1,004	891	1,891	3,189	3,186	4,550
Italy	617	1,100	1,725	943	1,434	2,046	1,650	1,429
Norway	113	88	53	68	23	19	17	2
Sweden	77	68	60	69	142	180	268	153
Spain	4	9	15	8	445	440	414	245
Switzerland	...	...	...	408	...	...	...	...
Russia	3	1	...	...	...	17	6	6
Other European Countries	...	4	25	60	..	...	8	13
United States of America	2,541	3,324	3,616	3,321	31,765	63,084	56,397	46,685
Japan	1,919	3,471	4,036	3,495	2,902	4,100	4,420	4,049

The above table shews that the value of the goods imported from 9 of the countries mentioned decreased. The imports from Australia, Austria, Germany, Norway and Sweden increased slightly in value. The value of exports in the case of almost every country decreased. In the case of Holland, however, there was an increase, due to the greater value of the tin exported to that country.

*United Kingdom.*—The articles imported from the United Kingdom, in respect of which the value increased, were cigarettes, coal, cement, steel girders, tin plates and electrical goods; while decreases occurred in biscuits, underwear, cotton piece goods, galvanized iron, motor cars, tyres and sewing machines.

The export value of rubber, tin, copra, gutta percha and illipinuts decreased, while that of sago, pepper, rattans, gum copal, raw hides and fish maws increased.

*United States of America.*—The articles from the United States of America, which shew an increased value during the year, are motor spirit, tin plates, and liquid fuel. The imports of kerosene, motor cars, tyres and cigarettes decreased.

Of the goods exported to the United States of America, which shew an increased value, the principal were tin, pepper, and canned pineapples. There were decreases in respect of rubber, copra, rattans, gutta inferior, gum copal, tapioca and sago.

*Japan.*—The value of most of the goods imported from Japan decreased. The principal decreases were in respect of rubber cases, glass bottles, hollow-ware, wheat flour, dried and salted fish, coal and crockery. The imports of cement and dyed cotton piece-goods increased. As regards exports, rubber, rattans, sago and motor spirit decreased in value, while tin and phosphate of lime increased.

*Netherlands East Indies.*—The value of the trade with the Netherlands East Indies again declined, owing to the drop in the value of rubber imported from there:—

Imports				Exports			
1924	1925	1926	1927	1924	1925	1926	1927
(000,000's)				(000,000's)			
\$227	\$397	\$361	\$355·6	\$83·6	\$113·2	\$112·3	\$101·1

The other imports which decreased were gutta percha, copra, cotton sarongs, motor spirit, arecanuts, coffee and timber. The imports of tin ore, kerosene, liquid fuel, sugar and coal increased.

The exports which decreased in value are rice, fish dried and salted, milk, sugar, cigarettes, tobacco, galvanized iron, plain and printed cotton piece-goods, and motor spirit. Increases occurred in respect of onions and garlic, coconut oil, machinery, kerosene, liquid fuel, motor car tyres, and boots and shoes.

*Continent of Europe.*—The aggregate trade with the Continent of Europe shews a slight decrease.

## V.—Communications

### (a) SHIPPING AND HARBOUR BOARDS

#### (i) Shipping

The total tonnage of merchant vessels arriving and departing was 39,693,766 as compared with 38,028,630 in 1926.

## Statement showing combined Arrivals and Departures of Merchant Vessels for the Years 1926 and 1927

NATIONALITY	1926					1927					Increase in 1927 as compared with 1926	Decrease in 1927 as compared with 1926
	Singapore	Penang	Malacca	Christ- mas Island and Labuan	Total tonnage (Entered and Cleared)	Singapore	Penang	Malacca	Christ- mas Island and Labuan	Total tonnage (Entered and Cleared)		
Finnish	...	...	...	...	...	5,304	...	...	...	5,304	5,304	...
Belgian	...	...	...	...	...	13,696	6,348	...	...	20,044	20,044	...
American	637,294	440,588	...	...	1,077,882	555,288	470,899	1,436	...	1,027,623	...	50,259
Brazilian	2,046	...	...	...	2,046	...	...	...	...	...	...	2,046
Zaccho-Slavoc	...	...	...	...	...	6,520	6,520	...	...	13,040	13,040	...
British	10,977,421	7,412,642	360,294	280,368	19,030,725	11,751,846	7,452,222	364,246	242,388	19,810,702	779,977	...
Chinese	87,484	22,104	...	...	109,588	87,782	3,124	16,728	...	107,634	...	1,954
Danish	454,584	249,492	...	...	704,076	454,152	292,980	18,764	...	765,896	61,820	...
Dutch	5,280,403	1,322,971	644	7,750	6,611,768	5,537,592	1,424,703	4,040	4,706	6,971,641	359,873	...
French	1,624,699	65,554	...	...	1,690,253	1,831,538	...	...	...	1,831,538	141,285	...
German	928,778	355,594	...	...	1,284,372	1,153,334	583,448	...	...	1,736,782	452,410	...
Italian	326,456	183,440	...	...	509,896	367,278	149,822	...	...	517,100	7,204	...
Japanese	3,918,010	1,193,962	235,714	93,700	5,441,386	3,906,443	1,051,908	21,190	96,614	5,076,155	...	365,231
Norwegian	777,221	98,080	4,566	6,924	886,791	1,052,859	77,192	34,842	...	1,164,893	278,102	...
Panama	15,980	...	...	...	15,980	...	...	...	...	...	...	15,980
Russian	31,606	...	...	...	31,606	...	...	...	...	...	...	31,606
Sarawak	118,802	...	...	2,038	120,840	133,195	...	124	3,044	136,363	15,523	...
Siamese	192,659	...	...	...	192,659	186,205	1,600	...	...	187,805	...	4,854
Spanish	59,900	...	...	...	59,900	29,788	...	...	...	29,788	...	30,112
Swedish	194,986	63,876	...	...	258,862	186,694	100,698	...	4,066	291,458	32,596	...
TOTALS	25,628,329	11,408,303	601,218	390,780	38,028,630	27,259,514	11,621,464	461,970	350,818	39,693,766	2,167,178	502,042
Net Increase											...	1,665,136

In the last five years the combined arrivals and departures of merchant vessels have been as follows:—

1923 ...	...	...	29,936,949 tons.
1924 ...	...	...	32,617,101 „
1925 ...	...	...	35,032,127 „
1926 ...	...	...	38,028,630 „
1927 ...	...	...	39,693,766 „

Of the small craft (steamers under 50 tons and native vessels) the combined arrivals and departures in 1927 were 64,562 in number and 2,302,838 in tons as compared with 62,980 and 2,239,590, respectively, in 1926.

Four new steam-vessels and two motor-vessels, with a tonnage of 300 tons gross, and forty-two sailing-vessels (3,937 tons) were registered during the year under the Imperial Shipping Acts. Under Ordinance No. 125 (Merchant Shipping), 15 new sailing-vessels (1,201 tons) were licensed under section 424, and 983 vessels (10,032 tons) under section 425.

### (ii) *Harbour Boards*

The income and expenditure of the SINGAPORE HARBOUR BOARD for the last two years have been as follows:—

	<i>Income</i>	<i>Expenditure</i>
	—	—
	\$	\$
Year ended 30th June, 1926 ...	12,055,233	8,354,278
Year ended 30th June, 1927 ...	12,027,510	8,895,896

The Capital debt due to Government amounted to \$52,673,858 at June 30th, 1927, in respect of which sum the Board pay interest half yearly, at the rate of 4 per cent per annum on \$50,102,430 and on the balance of \$2,571,428 at the rate of 3 per cent per annum.

In addition to this capital the Board has expended on new works and other expenditure of a permanent nature a sum of \$6,402,990 from reserve accounts.

The total gross earnings of the PENANG HARBOUR BOARD for the year ended 30th June, 1927, were \$1,973,182 and the expenditure \$1,550,898.

The capital debt due to Government stood on 30th June, 1927, at \$3,815,464.

## (b) RAILWAYS

A railway, the property of the Federated Malay States Government, traverses the island of Singapore and connects, by a causeway across the Johore Straits which was opened for traffic in October, 1923, with the peninsular system, thus affording rail communication with Johore, the Federated Malay States, Malacca, Province Wellesley, Penang, Kedah, Perlis and Siam.

## (c) ROADS

The metalled Roads of the Colony (exclusive of those maintained by the Municipalities of Singapore, Penang and Malacca) measure 559·2 miles, distributed as follows:—

Singapore	...	...	*102·5
Penang and the Dindings	...	...	99·4
Province Wellesley	...	...	175·6
Malacca	...	...	171·2
Labuan	...	...	10·5

Of the 559·2 miles of metalled road 343 miles are now treated with asphalt.

In addition to the metalled roads 245 miles of gravel road, natural road and hill path are maintained in the various Settlements.

The re-surfacing of all metalled roads with granite was continued a further 7 miles in Singapore, 6·2 miles in Penang and the Dindings, 2·8 miles in Province Wellesley and 19 miles in Malacca.

## (d) POSTAL, TELEGRAPH AND TELEPHONE SERVICES

The work of the Postal and Telegraph Sections of the Post Office and the number of subscribers to the Government Telephone Exchanges continued to increase during the year.

The building of the new General Post Office, Singapore, was nearly completed and it is anticipated that the Department will enter into occupation during the current year.

## SINGAPORE RADIO

In May a 150 Watt Short Wave Telegraph Transmitter was made primarily for experimental work.

Only a few tests were possible as on July 1st a transformer in the main spark set broke down. In order to carry

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\*This figure does not include roads upkept by Government within the Municipal Limits. These roads total 25 miles and form the approaches to Government buildings and Government Quarters.

on, a short-wave set was brought into use with such satisfactory results that all point to point (*i.e.* Sarawak and Christmas Island) traffic has since been carried on this set. Satisfactory test signals have been passed daily with Penang Radio.

A 500 Watt Marconi short-wave Telephony transmitter has been installed here temporarily. The set has been tested out on several wavelengths and Telephony reports have been received from Hongkong, Deli, Sumatra, Java, Penaga, Kuala Lumpur, Seremban and Ipoh.

#### PENANG RADIO

Rugby Press messages were regularly received, but the noon transmission continued to be unreadable during the greater part of the year.

In May the locally designed Press Receiver was replaced by a Marconi Type Rg. 12 Receiver with a Heart shape sense unit.

Results were obtained with this Receiver similar to those obtained from the one previously in use. Short wave experimental transmissions were carried out and good results obtained.

#### POSTS AND TELEGRAPHS

The postal rates are as follows:—

		LETTERS		POSTCARDS		PRINTED PAPERS
		1st oz.	Each succeeding oz.	Single	Reply	For every two ozs.
Foreign	...	12 cts.	6 cts.	6 cts.	12 cts.	2 cts.
Imperial	...	6 "	6 "	4 "	8 "	2 "
Local	...	{ $\frac{2 \text{ ozs.}}{4 \text{ cts.}}$	{ $\frac{\text{Each succeeding } 2 \text{ ozs.}}{2 \text{ cts.}}$	2 "	4 "	2 "

The number of postal articles (excluding parcels) posted in the Colony was 22,838,000, an average of 22.97 per inhabitant, as against 21.83, the average in the previous year. The number received for delivery was 17,940,000 as compared with 16,274,000 in 1926. The number of messages forwarded over the Government Telegraph lines during the year 1927 was 593,703 as compared with 626,561 in 1926, whilst the number

received over the Government Telegraph lines was 482,052 as compared with 486,005 in 1926. The number of subscribers to the Government Telephone Exchanges increased from 1,707 to 1,844.

The amount at the credit of depositors in the Post Office Savings Bank on 31st December, 1927, was \$3,745,797.39 an increase of 8 per cent. as compared with the amount on 31st December, 1926. The average amount at the credit of each depositor was \$215.94. There was a profit on the year's working of \$50,657.20. The estimated present value of investments is \$3,920,853.88. These figures are subject to revision after audit.

In addition to the General Post Offices at Singapore, Penang, Malacca and the Post Office, Labuan, there are 42 Sub-Offices in the Colony, including the Railway Post Offices at Bukit Panjang and Bukit Timah (Singapore), Jarak, Tasek Glugor Penanti, Pinang Tunggal, Simpang Ampat (Province Wellesley) and Tehong (Malacca). Of these 28 are Telegraph Offices.

The operations of the Money Order Branch amounted in 1927 to \$8,318,760.86, the principal business done being with India, Federated Malay States, Great Britain, Netherlands East India, Ceylon and the United States.

Eleven Submarine Cables radiate from Singapore:—

To Penang	...	5, thence to Madras	(3)
		„ „ Colombo	(2)
		„ „ Deli	(1)
Batavia	...	2, thence to Cocos	(1)
Banjoewangie	...	1, „ „ Darwin	(2)
Hongkong	...	1, Direct thence to Manila	(1)
		„ North China	(1)
		„ Macao	(1)
Cochin China	...	1, thence to Hongkong	(1)
Labuan	...	1, thence to Hongkong	(1)

There are also Government Telegraph lines from Penang to Province Wellesley, and thence to Perak, Selangor, Pahang, Negri Sembilan, Kedah, Perlis, Kelantan, Trengganu, Siam, Johore, Malacca and Singapore. The land line from Singapore to Penang *via* Kuala Lumpur was opened for Traffic in June 1909. There are 229 $\frac{5}{8}$  miles of Telegraph lines, 16 $\frac{1}{2}$  miles of submarine cable between Penang and Province Wellesley, containing 139 $\frac{5}{8}$  miles of wire, and 1 $\frac{1}{2}$  miles between Singapore and Johore, containing 7 $\frac{1}{2}$  miles



of wire. There are 2,436 miles of Telephone Line in Penang and Province Wellesley and 1,661 miles in Malacca. The Telephone Exchange in Singapore is worked by the Oriental Telephone Company and the exchanges in Penang, Province Wellesley and Malacca are worked by the Post Office. There are two Government Wireless Stations in the Colony situated at Paya Lebar (Singapore) and Penaga (Penang) respectively. The Station at Paya Lebar communicates with fixed stations at Kuching (Sarawak) and Christmas Island and with ships. The Penaga Station communicates with Rangoon and with ships.

#### (c) COMMUNICATION BY SEA

Over 50 lines of sea-going steamers touch at Singapore. There is regular communication with Europe weekly alternately by British India Steamers *viâ* Rangoon, Calcutta and Bombay homewards, *viâ* Bombay and Negapatam outwards, and by the Peninsular and Oriental vessels; and fortnightly by the Messageries Maritimes *viâ* Ceylon. In addition there is a weekly service to Europe by the Steamship Company, Nederland and Rotterdam Lloyd alternately, and a service at frequent intervals by Holt, Chargeurs-Reunis, Glen, Shire, Japanese and other lines. With China and Japan there is fortnightly communication by the P. & O. and M. M. lines, and by other lines frequently; with Cochin China fortnightly by the Messageries Maritimes and the Societe des Affreteurs Indo-Chinois and monthly by Chargeurs-Reunis; with Manila *viâ* Hongkong frequently and direct by Spanish Packets, Steamship Co. Nederland, and British Packets occasionally; with Bangkok frequently by Straits Steamship and other steamers; with Batavia and other Netherlands India ports frequently by steamers of the Netherlands India Company's Steamship Co., and of the Nederland's and Rotterdam Lloyd Co.; with Australian ports frequently by British India, Burns Philp, Ocean Steamship Company, Western Australian Steam Navigation Company, Austral East Indies Line, and other lines direct, and occasionally *viâ* Colombo, with the sailings thence by Orient Packets; with Madras (direct) and other ports on the Coromandel Coast fortnightly by the British India Company's steamers, and with Rangoon and Calcutta weekly by the Indo-China Steam Navigation Company, British India, Apcar, and other steamers. In addition to the above there is frequent communication with Penang, Malacca, and ports of the Malay States, Hongkong, etc., by local lines. Most of the larger steamers call at Penang. Letters from England reach Singapore in from 22 to 24 days.

## VI.—Justice, Police and Prisons

### STATISTICS

The total number of seizable offences recorded during 1927 was 6,437.

Of the admitted reports convictions were obtained in 2,153 cases and 196 cases awaited trial in 1928. Under the heading of "Serious Offences against the person" there was an increase of 49 in the number of murders and an increase of 57 in reports of hurt caused by dangerous weapons. As regards offences against property there was an increase of 49 under robbery, a decrease of 31 in the number of reports of housebreaking and theft and an increase of 304 in the number of reports of theft.

Fifty-four thousand one hundred and seventy-two non-seizable offences were reported to the Police in 1927. The number of persons arrested in connection with both seizable and non-seizable offences was 39,463 males and 555 females. There was an increase of 24 in the number of extortions.

### CRIME AND SECRET SOCIETIES

The Cantonese societies gave little trouble from August, 1926 until the end of the year, mainly owing to internal dissensions and police supervision. A feud then broke out however between the 'Heng' and 'Kwan Yi' groups and there were several shooting affrays in the public streets involving loss of life among members of the gangs and innocent civilians.

Gangs of the 'Heng' and 'Kwan Yi' groups were also responsible for many robberies during the first nine months of the year. A general round up of Cantonese suspects was therefore undertaken in July and the city was thus freed of large numbers of notorious bad characters. Two important raids by the Police in July and September against the 'Kwan Yi' and 'Heng' respectively resulted in the arrest of nearly 40 men, including several leading members and criminals. The activities of the 'Heng' group were attacked in October, by which time the most troublesome societies were reduced to a state of quiescence. Up to the time of writing there has been no further serious outbreak.

As in the case of the Cantonese fighting among the Teo Chiu faction tends to become an annual occurrence. The 1926 feud was settled in January, 1927; but there was a serious recrudescence in September of that year, due to various minor

disputes. A large number of murders and attempted murders were perpetrated. Both the Police and Chinese Protectorate failed to secure any detailed information which would enable them to attack the opposing factions and no assistance was rendered by the public. The dispute was eventually settled through the intervention of leading members of the Chinese community, who, however, were entirely unable to give any information which would help to prevent further outbreaks or strengthen the hands of the authorities. Until the Police are able actually to punish the criminal element in these factions, this feud is liable to break out at any time on the smallest pretext.

Internal troubles among various Hokkien societies kept the Police active throughout the year. There was a good deal of fighting and shooting, but fortunately none of the disputes developed on a scale comparable with the dissensions of the Cantonese and Teo Chiu.

At the beginning of the year there were 974 prisoners in the three Criminal Prisons of the Colony (Singapore, Penang and Malacca). 3,966 were admitted during the year as compared with 2,572 during 1926 and 3,843 were discharged. One thousand and ninety-seven (1,097) remained at the end of the year. There were 36 vagrants in the Houses of Detention at the beginning of the year; during the year 671 were admitted and 533 were discharged. Of the 533 vagrants discharged 75 found employment and 393 were repatriated.

“Middle-grade” prisoners are employed on industrial labour such as printing, book-binding, tailoring, carpentry, washing, weaving, shoe-making and mat and basket-making.

The “Upper-grade” men are mostly employed as cooks, orderlies, clerks, etc., the “Lower-grade” men at husk-beating, and the “Short-sentence” and “Revenue-grade” men at husk-beating and fatigue duties.

The sanitary condition of the prisons and the health of the prisoners have been satisfactory throughout the year.

## VII.—Public Works

In Singapore the new General Hospital was completed during the year and further progress was made with the new General Post Office and the new Mental Asylum.

In Penang the Marine Dépôt at Glugor and the Sikh Police Dépôt at Patani Road were completed and occupied.

In the Dindings the new Water Supply for Lumut was begun.

In Province Wellesley the work on the iron bridge over the Krian River at Nibong Tebal and the reconstruction of main roads were continued.

In Malacca special repairs to One Fathom Bank Lighthouse are in progress, certain additions and alterations to Central Station Barracks are well in hand and the sea reclamation from the Bastion to the Rest House is progressing satisfactorily.

In Labuan a new Dam for the Reservoir was begun and quarters for a Government Subordinate in North Road and one set of coolie lines for the Health Department were completed.

The Dredger *Tembakul* was engaged in the early months of the year on dredging a new Channel at Malacca and in the latter part of the year on dredging operations at Weld Quay, Penang.

## VIII.—Public Health

### A.—VITAL STATISTICS

The population of 1927 is estimated on that of the Census of 1921. The distribution is as follows:—

		<i>Estimated</i> <i>1926</i>	<i>Estimated</i> <i>1927</i>
Singapore	...	517,082	538,077
Penang	...	324,316	333,063
Malacca	...	184,437	188,828
Total	...	1,025,835	1,059,968

The number of births registered during the year was 37,233 and the number of deaths 35,561. The driest months during 1927 were from June to September when the drought was responsible for a large number of deaths from malaria, pneumonia and among infants.

The percentage of males born was 51·33. The highest birth-rate by nationalities was 58·28 per thousand amongst Chinese.

The infantile mortality (deaths of children under one year) was 214·14 per thousand births as against 205·47 in 1926 and 184·62 in 1925.

The number of deaths registered as from infantile convulsions (deaths of children under one year of age) was 5,831 as against 4,783 and 3,648 in the two previous years. Dietetic errors, tetanus and malaria are common causes of convulsions.

The crude death-rate, 33·55 per thousand as against 31·81, was the highest since 1918. The average for the last ten years is 32·01. The death-rate for 1925, 27·26 per thousand, was the lowest on record.

Malaria was responsible for 6,296 deaths as against 6,452 in 1926, while fever unclassified accounted for 1,983 deaths as against 2,662 in the previous year.

The prevalence of malaria was due to deficient rainfall, which left many anopheline breeding grounds unflushed, enabling the larvæ to come to maturity.

The highest death-rate in any month was 36·67 in July. With the advent of the rains in September the death-rate dropped to 32·32 and then to 30·04 in the last two months of the year.

Two thousand nine hundred and fifty-two deaths were due to tuberculosis as against 2,690 in the previous year.

Pneumonia caused 2,690 deaths as against 2,568 in 1926. Only 198 deaths were recorded as due to influenza.

Beri-beri accounted for 1,531 deaths as against 1,098, 957 and 904 in the years 1926, 1925 and 1924.

Dysentery caused 1,111 deaths classified as follows:—

Dysentery Amœbic	...	...	344
„ Bacillary	...	...	281
„ Unclassified	...	...	486
			<hr/>
Total	...	1,111	<hr/>

The number of deaths from dysentery in 1926 was 1,015.

*Infectious Disease.*—There were 28 deaths from small-pox, 14 deaths from cholera, 31 deaths from plague and 14 deaths from cerebro-spinal fever, excluding deaths in Maritime Quarantine Stations.

## B.—HEALTH BRANCH

### PORT HEALTH

One thousand five hundred and sixty-eight visits were paid to ships in Singapore and 998 visits to ships in Penang, by Port Health Officers, who examined 1,010,249 persons. One hundred and nine thousand and eighteen persons were retained under observation in the two quarantine stations, mostly for short periods.

The number of persons from ships treated for infectious diseases in the Singapore Quarantine Station was 15 for

cholera, 19 for small-pox and 11 for cerebro-spinal fever: in Penang 42 for cholera and 11 for small-pox.

### RURAL CONSERVANCY

The Health Officers in each Settlement continued to supervise the Sanitation and Conservancy in the rural area.

### ANTI-MALARIAL WORK

The sum of \$226,090.14 was spent on anti-mosquito and anti-malarial measures in a general reduction of all harmful mosquitoes. Many areas formerly malarious are becoming free from this disease. The chief item of expenditure has been drainage.

### C.—KING EDWARD VII COLLEGE OF MEDICINE, SINGAPORE

His Excellency the Governor honoured the College by consenting to be Patron and presented the Prizes in October, 1927.

The total number of licentiates of the College at the end of the year was 212 and the number of students 110.

Colonel R. A. NEEDHAM, C.I.E., Travelling Inspector of the General Medical Council of Great Britain, reported favourably on the College and made certain recommendations, of which a considerable number have been acted upon.

### D.—HOSPITAL

Sixty-nine thousand one hundred and twenty-three in-patients were treated in the hospitals of the Colony, as against 68,014 in 1926. The malaria admissions were 14,178 as against 14,293 and the deaths 914 as against 984.

Admissions for venereal disease were 4,377 with 85 deaths.

### E.—DISPENSARIES

Out-patients numbered 166,428 and attendances 313,264 as against 159,903 out-patients and 312,090 attendances in 1926.

Out-patients treated for venereal diseases were 24,883 as compared with 22,245 in 1926. The attendances were 146,350 as against 54,090.

The number of out-patients treated for yaws was 7,979 as compared with 8,359 in 1926. This disease is steadily decreasing owing to widespread and effective treatment.

The attendances at the Women's and Children's Dispensary, Kandang Kerbau, Singapore, were 33,888 as compared with 32,247 in 1926.

The number of cases treated by the Penang travelling motor dispensary, which started work on 25th August, 1927, was 19,269. The travelling dispensary in Province Wellesley treated 21,197 cases as against 19,471 in 1926, and the travelling motor dispensary in Malacca treated 13,832 cases as against 8,369 in 1926.

In Singapore a travelling motor dispensary started work in May and treated 15,652 cases.

#### F.—LEPERS

The total number of lepers treated in the Leper Asylum was 1,112 and the total deaths 143, as against 1,022 treated and 131 deaths in 1926.

With the continuance of modern treatment, the death-rate has been halved since 1920.

#### G.—MENTAL HOSPITAL

Eight hundred and eighty-one male and 212 female lunatics were treated during 1927 in this institution. The number remaining at the end of the year was 634 males and 146 females.

The New Mental Diseases Hospital on Trafalgar Estate will be completed during 1928.

#### IX.—Education

There were 20 Government English Schools in the Colony with an average enrolment of 8,145 pupils. The expenditure on these schools was \$987,594.

There were 29 Aided English Schools with an average enrolment of 15,010 pupils. The grants paid by Government in aid of these schools amounted to \$760,151.

The expenditure on the 214 Government Vernacular Schools was \$498,659 and their average enrolment was 18,044.

Excluding Chinese Vernacular Schools there were 13 Aided Vernacular Schools, with an average enrolment of 2,059, the grants to which for 1927 amounted to \$19,664.

The pupils in the secondary classes in the English Schools numbered 1,499 as against 1,499 in 1925 and 1,397 in 1926.

Thirty-nine students passed the final third year examination of the Normal Classes for teachers, as compared with 14 in 1926.

There were six student teachers from English Schools in Malaya studying at Hong Kong University at Government expense. On their return they are employed as teachers in the Government and Aided Schools. As soon as Raffles College is opened in Singapore, student teachers will be trained in the Colony.

Twelve candidates entered for the two Queen's Scholarships, revived in 1924 for boys or girls, chosen at a special competitive examination conducted by the Cambridge Delegates and approved by a selection Board, to enable them to complete their studies at a University in the United Kingdom. Competitors may be of any race or creed, but must be British subjects. Two candidates from Penang won the scholarships but several candidates were fit in the opinion of the examining body to study for an honours' degree at Oxford or Cambridge. Both the successful scholars propose to study Law.

The European Staff was still short of officers chiefly owing to the creation of supernumerary appointments to provide for officers going on leave and for officers seconded to Kedah and Johore.

During the year six European Masters, appointed to the Malay Educational service, were allocated to the Colony. One European Master and one European Mistress resigned. Two new European Mistresses were allocated to the Straits Settlements.

The appointment of an Art Master for Singapore and of a Physical Instructor for the Colony has been fully justified by results in these important branches of the school curriculum.

A new Elementary English School for 240 pupils was opened at Radin Mas, Singapore.

The building of the new Raffles Girls' School, Singapore, was nearly finished.

The new Penang Free School was completed.

The new High School at Bukit Mertajam, Province Wellesley, was opened in January.

A new annexe to the Government Girls' School, Penang, was equipped and furnished.

A new site for Malacca High School was purchased.

The medical inspection of schools and pupils and instruction in hygiene are slowly creating an interest in public health.

The Singapore Evening Classes in Commercial and Technical subjects continued to satisfy a local want. In the last term the total enrolment was 415. Instruction was



given in English, Book-keeping, Shorthand and Typing, in Mathematics, Physics, Chemistry, Mechanics, Mechanical and Survey Drawing, Building Construction, Electricity and Magnetism, and Sanitary Inspection. Twenty-five students passed the examination of the London Chamber of Commerce held in November, 1926, and twelve passed the examination of May, 1926.

Nautical Classes under a European Instructor gave instruction in Malay for helmsmen, gunners and masters of local craft.

In Penang 135 students attended the evening classes in commercial subjects, and 34 the technical classes.

There were evening classes in Malacca in Type-writing and Shorthand.

The Sultan Idris Training College for Malay Vernacular teachers at Tanjong Malim in the Federated Malay States accommodates one hundred students from the Colony. The Colony defrayed one-third of the expenditure, paying the sum of \$46,901.

The Colony's total expenditure in connection with Chinese Schools was \$14,981.

At the close of the year registered Chinese Schools numbered 312 with 21,386 pupils.

One Chinese school in Singapore received a grant-in-aid during 1927 amounting to \$659.50; in Penang four Chinese schools received grants amounting to \$14,322.

*Raffles College.*—The accounts showed at the end of 1927 \$1,693,496 to the credit of the General Fund and the Funds of Buildings and Scholarships. The Colony is contributing \$1,000,000 towards the cost of building. Annuities in perpetuity amounting to \$63,000 have been promised by the Governments of the Straits Settlements, Johore and Kelantan; annuities for a term of years have been promised by the Governments of the Federated Malay States and Kedah and various private individuals and estates.

Considerable progress has been made in the building of a Hostel and of the Science and Administration Blocks, which will be completed by the middle of 1928. The houses for the Principal and Professors were nearly ready at the end of the year.

The Honourable Mr. R. O. WINSTEDT, C.M.G., D. LITT. (Oxon.), M.A., Director of Education, Straits Settlements and Federated Malay States, continued to act as Principal. The College is at present administered by Executive and Financial Committees.

The most important educational development of the year was the recognition by Government of the need for an Agricultural School. A school is to be built in the Federated Malay States but the Straits Settlements Government will pay a share of the expenses and enter a proportion of the total number of students.

## **X.—Lands and Survey**

### **A.—LANDS**

#### **(i).—LAND TENURE**

*Singapore.*—Land in the hands of private owners in Singapore is held direct from the Crown either by lease or grant. The earliest of the existing titles are the 999-year leases issued for land in the town soon after the founding of Singapore.

The first of the present 99-year leases for land in the town was issued in 1838.

From 1845 onwards a large number of freehold grants were issued for land outside the limits of the town. The margin allowed for the expansion of the town was, however, insufficient, with the result that land in the most densely crowded part of the present town is held under titles which were originally issued for land required for agricultural purposes. In the case of town lands the issue of 99-year leases continued.

After the transfer to the Colonial Office in 1867 the titles issued for land both in town and country were 99-year leases and 999-year leases. Ordinance No. II of 1886 now Ordinance No. 34 (Crown Lands) provided for a Statutory form of Crown Title—the present Statutory Land Grant, which is a grant in perpetuity subject to a quit-rent the form of which was simplified by the omission of various covenants and conditions previously inserted in leases, most of which are implied by virtue of the Statute.

The Statutory Grant has been the usual form of title issued but the policy hitherto has been to restrict the issue of Statutory Grants substituting as far as possible leases for terms not exceeding 99 years. Monthly and annual permits are also issued for the temporary occupation of Crown Land. Leases of foreshore can be issued under Ordinance No. 69 (Foreshores) for terms which must not exceed 100 years except in special cases with the approval of the Secretary of State.

*Penang* --Land in Penang and Province Wellesley is held from the Crown, by indenture, grant or lease. The conditions of tenure vary according to the policy of the

Government at the time the documents were issued. In Penang eleven different kinds of title are in the hands of the public as compared with eighteen in Singapore. Unoccupied Crown land is obtainable on Leases. Alienation of foreshore is subject to Ordinance No. 69 (Foreshores).

The rates of rent reserved in old leases vary in different localities.

*Malacca.*—The tenure of a considerable portion of the land in Malacca Town has remained unchanged since the days of Dutch rule. Possession is evidenced in many cases by documents of title in Dutch.

The remainder of the land in the Town is chiefly held under leases of 99 years but there are a few leases of 999 years and a few Statutory Grants.

Occupied land in the country is held under Statutory Grants or 99 year leases from the Crown in the case of Estates but small holdings owned by Malays are held under Customary tenure as defined by the Malacca Lands Ordinance. There is special legislation, Ordinance No. 69, for the alienation of foreshore.

Land is obtainable without premium if held under customary tenure. Land to be held under Grant or Lease is generally sold by auction. The principal land Revenue consists of rents on Grants or Leases and of Mukim Assessment on land held under Customary tenure.

#### (ii).—LAND REVENUE

The Revenue in 1926 and 1927 was distributed as follows:—

		Land Revenue	Reimburse- ments	Land Sales	Total
		\$	\$	\$	\$
Singapore	(1926	376,364	43,800	70,673	490,837
	1927	368,783	43,689	359,889	772,361
Penang	(1926	243,882	29,030	12,453	285,365
	1927	206,145	31,599	107,249	344,993
Malacca	(1926	663,685	9,213	439,407	1,112,305
	1927	679,505	19,531	386,793	1,085,829
Labuan	(1926	5,164	2,793	936	8,893
	1927	5,543	2,786	1,361	9,690
Total	(1926	1,289,095	84,836	523,469	1,897,400
	1927	1,259,976	97,605	855,292	2,212,873

## (iii).—ALIENATION OF LAND

The area of Crown Land alienated, and the number of Statutory Grants issued during the last five years, together with the amount of premia paid in respect of the same, are shown in the following table:—

—	1923	1924	1925	1926	1927
<i>Singapore</i>	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Area granted ...	1,730 0 04	1,355 0 27	1,059 1 29	441 1 00	33 3 18
	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.
.. Town Lots ...	123,743	46,139	12,183	13,738	100,915
Number of Statutory Grants issued ...	64	57	41	60	101
Premia paid ...	\$131,476.00	\$70,399.00	\$87,631.00	\$71,241	\$48,738
<i>Penang</i>	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Area granted ...	525 3 24	1,284 1 22	1,120 3 6 45	2,134 1 11	1,825 1 39 03
	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.
.. Town Lots ...	Nil.	155	19,901	Nil.	5,539
Number of Statutory Grants issued ...	127	146 S. Grants (& 5-99 years' Leases.)	171 S. Grants (27-99 years' Leases.) 4-10 do.	391 Statutory Grants, 10 Penang Hill Leases 25-99 years' Leases 1-10 years' Lease	300 Statutory Grants, 99, 99 years' Leases 1 Foreshore Lease for 80 years covering an area of 3,600 sq. ft.
Premia paid ...	\$12,978.16	\$18,464.00	\$410,745.00	\$14,165.72	\$19,424.00
<i>Malacca</i>	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Area granted ...	2,348 0 16 96	2,712 2 18 64	3,686 3 11 02	737 1 03 75	8,018 0 26
	sq. ft.	sq. ft.	sq. ft.		sq. ft.
.. Town Lots ...	Nil.	59,350½	Nil.	6 3 35	23,720
Number of Statutory Grants issued ...	273	127 & 1 Lease	80 & 1 Lease	48 & 34 Leases	79 Statutory Grants, 55, 99 years' Leases, 2 30 years' Leases and 2 Mining Leases
Premia paid ...	\$72,345.00	\$202,830.00	\$254,040.10	\$57,927	\$109,297.00
<i>Labuan</i>	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Area granted ...	59 2 35	135 0 20	146 3 00	457 3 24	557 2 06
.. Town Lots ...	Nil.	0 0 24½	Nil.	0 2 01	131
Number of Statutory Grants issued ...	91	50	52	124	
	(55 new Grants, 17 Sub-division Grants, 19 in exchange for old grants)	(23 new Grants, 25 Sub-division Grants, and 2 in exchange for old grants)	(22 new Grants, 24 Sub-division Grants, and 6 in exchange for old grants)	(87 new Grants, 34 Sub-division Grants and 3 issued in exchange for old grants)	(73 new Grants, 19 Sub-division Grants and 9 issued in exchange for old grants)
Premia paid ...	\$49.40	\$209.20	\$217.20	\$936.75	\$1,360.50

## B.—SURVEY

### (i).—GENERAL

The Survey Department, which until 1920 had been under the control of the Colonial Engineer, was amalgamated with that of the Federated Malay States in that year. Since then its activities have been directed by the Surveyor General, Federated Malay States and Straits Settlements stationed in Kuala Lumpur, with Superintendents stationed in Singapore, Penang and Malacca in immediate control of its operations.

Subdivisional and other surveys required for the registration of transactions in land under the Registration of Deeds Ordinance provide a large proportion of the work of the Department; but there is still a considerable demand for surveys for alienation, detailed surveys of towns, surveys for land acquisition and revisional surveys.

The methods now used in the field, in the office and in the compilation of records are such as to meet the requirements of the most exacting of land systems. The results being attained can therefore be looked on as permanent and adequate for any system of land tenure. But the transition from the methods of the past, which aimed at a draftsman's rather than a computer's value for boundaries, is productive of many difficulties.

Expenditure on surveys amounted to \$508,648 during 1927 against \$460,975 in 1926. The revenue amounted to \$94,074 as against \$92,805. The 1927 expenditure includes \$30,695 for Topographical Surveys, while in 1926 these cost \$21,240.

The demand for title and other surveys was more than maintained during the year. In the Settlement of Malacca this demand was fully met, and arrears were reduced. In Penang and Province Wellesley equilibrium was almost maintained, but in Singapore the number of uncompleted surveys increased considerably.

Although surveys in Singapore present obstacles of a kind and degree seldom encountered elsewhere, the Department's chief difficulty lies in the maintenance of a subordinate staff adequate in numbers and efficiency. During recent years recruiting has proceeded energetically and training methodically, but the full effects of this campaign will not be felt for some time. It takes nearly six years to convert a youth fresh from school into an efficient surveyor, and the attractive terms offered by private employers result in frequent resignations.

The Topographical survey of Penang Island, on a scale of four inches to one mile, was completed during the year, while progress continues on the Revision Survey of Malacca, which was commenced in 1923 and amounts in fact to a complete redetermination of boundaries.

The very wide selection of maps available to the public was increased by the publication during the year of a map of Singapore Island, scale  $1\frac{1}{2}$  inches to one mile, a map of Malacca territory, scale one inch to one mile, a map of Penang and Province Wellesley on the same scale, a Penang Municipal map, several mukim maps of Malacca and four sheets of the Topographical survey of Penang Island.

#### (ii).--METEOROLOGY

Responsibility for the direction of meteorological activity was assigned to the Surveyor General, Federated Malay States and Straits Settlements at the beginning of 1927. As a preliminary to scientific investigation and a systematic study of the climate of Malaya a scheme of development was submitted to and accepted by all Governments concerned. The proposals involve the establishment of groups of "second order" stations down each coast and along the centre of the Peninsula. At these stations determinations of barometric pressure, temperature, humidity, rainfall, wind direction and velocity, the amount and type of cloud and the duration and intensity of thunderstorms will be recorded. In addition it is hoped to establish a large number of stations at which temperature and rainfall data will be collected with the co-operation of the planting community.

The organisation outlined should provide a foundation on which can be built a Meteorological Department capable of dealing comprehensively with the needs of aviation, upper-air research work, the distribution and exchange of information and weather predictions.

The work accomplished during 1927 includes the selection and acquisition of station sites, the ordering of essential instruments and the recruitment and partial training of a proportion of the Subordinate Staff which will be required.

#### (iii).--GEOLOGICAL SURVEY

The preliminary Geological Survey of the Straits Settlements has been completed by the publication of an account of the geology of Malacca by Mr. J. B. SCRIVENOR, Government Geologist, Federated Malay States. It is improbable that there remain in Malacca undiscovered mineral deposits

of importance. Gold mining, as an industry, has ceased to exist but tin mining continues in the vicinity of Kesang and Jasin. Tin ore occurs on the coast and in the sea-bed between Tanjong Serai and Tanjong Bras Basa, where prospecting, now proceeding, may prove values sufficiently high for dredging.

The results of the preliminary geological survey are incorporated in the geological map of Malaya published by the Survey Department.

## **XI.—Labour**

### **(i).—GENERAL**

(a) The majority of labourers in the Colony are Chinese and Southern Indians. The latter are chiefly engaged in agricultural work and on public services, the former in agriculture and every other form of manual labour. Skilled work is almost entirely in the hands of the Chinese.

(b) In addition there are about 3,500 Javanese labourers, immigrants from the Netherlands East Indies.

(c) Conditions of labour in the Colony are governed by the provisions of Ordinance No. 197 (Labour), and by the Netherlands Indians Labourers' Protection Ordinance, 1908. These Ordinances are administered by a Labour Department under the direction of the Controller of Labour, Malaya.

During the year under review relations between employers and labourers continued to be satisfactory. There were no strikes or serious disturbances.

(d) Standard rates of wages, namely, 50 cents a day for men, and 40 cents a day for women were prescribed for Southern Indian labourers in Province Wellesley under section 131 of the Ordinance. These rates came into force on the 1st of July, 1927.

In other parts of the Colony, South Indian labourers earn from 45 cents to 60 cents (men), and from 35 cents to 50 cents (women). The rates in the larger towns are usually higher than these.

Javanese and Malays earn from 50 to 60 cents a day and Chinese who are usually employed on contract (*i.e.* piece work) earn considerably more.

(e) The health on estates in Penang, Province Wellesley and the Dindings was satisfactory, the death rate among Indian labourers in Province Wellesley being 14·08 per mille and in the Dindings 19·59 per mille. The death rate on the few estates in Penang was 7·46 per mille.

(f) The death rate on estates in Malacca on an average population of 13,181 was 20·6 per mille.

(g) The death rate among Indians in Singapore was 29·83 per mille.

(h) The death rate among labourers of other races, of whom far fewer are employed on estates, was inconsiderable. In the Settlement of Penang on an average population of 2,123 it was 1·89 per mille. In Malacca among 584 Javanese it was nil and amongst 3,231 Chinese 5·5 per mille.

## (ii).—IMMIGRATION

(a) *Chinese* Immigration from China is uncontrolled. In 1927 the number of immigrants arriving in the Colony from China reached the record figure of 359,262, an increase of 3·06 per cent over the number for 1926 and exceeding that for 1911, the highest year before the war, by 89,408 or 33·1 per cent.

Adult males formed 70·2 per cent, and adult females 16·3 per cent of the immigrants.

During the year the number of emigrants returning to China was 155,198 and the excess of immigrants over emigrants was 204,064 or 56·8 per cent of their total number.

The chief factors contributing to the increased immigration were the comparative prosperity of Malaya's major industries, the demand for skilled and unskilled labour, the decline in passage rates and the continued unsettled conditions prevailing in South China.

Women and children arriving numbered 106,758, which again constitutes a record.

The following figures show the arrivals during the four previous years:—

1923	...	...	...	159,019
1924	...	...	...	181,430
1925	...	...	...	214,692
1926	...	...	...	348,593

(b) *Southern Indians*.—The immigration of labourers from Southern India is regulated by the Indian Immigration Committee (of which the Controller of Labour, Malaya, is *ex officio* Chairman) appointed by the Governor.

The Railway fares in India, steamer passages, and transport expenses of such labourers to their places of employment are paid from the Indian Immigration Fund.



The total number of immigrants (deck passengers) arriving at Penang from Southern India during the year was 156,132 as compared with 174,795 in 1926.

These figures include both "assisted" and "other" Immigrants.

The assisted immigrants are free labourers imported at the expense of the Indian Immigration Fund for work on estates, mines and elsewhere. The other immigrants are deck passengers paying their own fares, 66 per cent of whom were of the labouring classes.

The number of Indians leaving the Colony for Southern India was 88,718 as against 65,786 in 1926. These figures include all deck passengers of whom it is estimated that 79 per cent were labourers.

The figures for arrivals for the last 4 years are as follows:—

	1924	1925	1926	1927
	—	—	—	—
Assisted Immigrants	43,147	70,198	149,414	123,826
Other Immigrants ...	18,905	20,510	25,381	32,306
	<hr/> 62,052	<hr/> 90,708	<hr/> 174,795	<hr/> 156,132

The assisted immigrants consisted of 104,382 adults and 19,444 minors. Of the adults 76,937 were men and 27,445 were women. About 1/5th of the assisted immigrants remained in the Colony: the others proceeded to other parts of Malaya.

#### THE INDIAN IMMIGRATION FUND.

The income of the Fund is derived from a quarterly assessment levied on all employers of South Indian labour throughout Malaya based upon the number of days' work done by such labourers during the quarter.

With a view to increasing the number of female immigrants, a differential rate is levied on male and female labourers. The rate of assessment was fixed at \$5 for males and \$4 for females for the first and second quarters and at \$4 for males and \$3 for females for the third and fourth quarters of 1927, in respect of every 72 days' work done.

#### (iii).—REPATRIATION

During 1927, 7,786 adult and 1,821 minor decrepit or destitute Indians were assisted with passages back to India.

**XII.—Miscellaneous****A.—LEGISLATION**

Twenty Ordinances were passed during the year 1927. Of these two were Supply Ordinances and twelve were purely Amending Ordinances.

The Ordinances which are not Amending Ordinances are:—

- (i) The Malacca Re-Surveys Ordinance (No. 3) which provides for the re-survey of all lands in the Settlement of Malacca and for the substitution of new maps for maps published under Ordinance No. 31 (Boundaries and Survey Maps).
- (ii) The Carriage of Goods by Sea Ordinance (No. 4) which reproduces in all essentials the provisions of the Carriage of Goods by Sea Act, 1924, with the object of securing international uniformity of maritime law, as was agreed at meetings of the International Maritime Conference and Committees of the Conference in 1922 and 1923.
- (iii) The Deleterious Drugs Ordinance (No. 7) which consolidates and amends the law relating to deleterious drugs so as to embody in it such of the provisions of the International Opium Convention, signed at Geneva on the 19th February, 1925, as are applicable to the Colony.
- (iv) The Singapore Improvement Ordinance (No. 10) which constitutes a Board of Trustees with power to take measures for the improvement of the Town and Island of Singapore in regard to housing accommodation, means of communication and insanitary areas.
- (v) The Liquors Revenue Ordinance (No. 11) which repeals and re-enacts with amendments the law for collecting revenue upon intoxicating liquors.
- (vi) The Children Ordinance (No. 17) which prohibits the employment of children upon forms of labour unsuitable to them and provides for their detention and care in Government houses and hospitals and other places of safety.

The principal Amending Ordinances are:—

- (i) The Telegraphs (Amendment) Ordinance (No. 1) which places upon unlicensed persons, who are in possession of apparatus capable of transmitting or receiving wireless signals, the burden of proving they have not worked the same.

- (ii) The Reformatories and Industrial Schools (Amendment) Ordinance (No. 5) which enables the Governor in Council to fix from time to time the rate of maintenance of a child who is detained in a reformatory or similar institution.
- (iii) The Courts (Amendment) Ordinance (No. 6) which removes the doubts as to whether a woman, who is otherwise qualified to be admitted and enrolled as an advocate and solicitor of the Supreme Court of the Colony, is disqualified by reason of her sex from such admission and enrolment.
- (iv) The Arms and Explosives (Amendment) Ordinance (No. 9) which provides that, where any vessel has been used for the importation, exportation or removal of any article in contravention of the Ordinance, liability shall not attach to the owner and master of the vessel, if it is proved that he was not implicated in the placing or keeping of the article on board the vessel and that the offence was committed without his knowledge, consent or connivance.
- (v) The Women and Girls Protection (Amendment) Ordinance (No. 15) which requires prostitutes, who are suspected on substantial grounds to be suffering from venereal disease, to submit themselves to medical examination.
- (vi) The Chandu Revenue (Amendment) Ordinance (No. 16) which gives effect to the provisions of the International Opium Convention 1925, so far as they affect the carriage through the Colony of opium consigned to destinations outside the Colony.
- (vii) The Rubber Restriction (Amendment) Ordinance (No. 19) which prevents the utilisation of export rights carried over from the previous quarter until the rights of the current quarter are exhausted.

#### B.—REGISTRATION OF JOINT STOCK COMPANIES

During the year 70 new companies were registered, with a capital of \$28,205,571, including 50 private companies with a capital of \$11,727,000.

Four hundred and ninety-four companies remained on the register at the end of the year, 41 of which were in liquidation, and the total subscribed capital of the 440 companies carrying on business was \$190,583,572.

Five hundred and fifty companies not incorporated in the Colony have filed documents under the Companies Ordinance; of these, 429 are British, 26 are Japanese, 34 are Dutch, 2 are German and 27 are incorporated in the United States of America, Hawaii and the Philippine Islands. Apart from these, 15 companies - all British--have complied with the Life Assurance Companies Ordinance, and private Ordinances have been enacted in respect of 5 foreign companies. Seventy-one companies do fire insurance business.

### C.—BANKRUPTCIES

There were 47 trade bankruptcies of which 32 were Chinese. In 21 cases the bankrupts had absconded.

In three cases liabilities exceeded \$100,000, in 6 cases \$50,000 and in 13 cases \$10,000.

Three Deeds of Arrangement were registered.

H. MARRIOTT,

*Colonial Secretary,  
Straits Settlements.*

SINGAPORE, 1st June, 1928.



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## **THE GAMBIA.**

### **ANNUAL GENERAL REPORT 1927.**

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#### **History and Geography.**

The first descriptive account of the Gambia dates from the middle of the 15th century, when Alvise Cada Mosto, a Venetian, visited the river in charge of an expedition fitted out by Prince Henry of Portugal. He appears to have travelled some 40 miles from the mouth in 1456. The Portuguese were able to maintain a monopoly of the trade for more than a century; an English expedition, fitted out in 1481, was prevented from sailing by the influence of King John II of Portugal. In 1588 a Patent from Queen Elizabeth gave certain merchants of Devon and London a monopoly for 10 years of the "free and whole trafique trade and feat of merchandise" to and within the Senegal and Gambia rivers. It was stated in the Patent that one voyage had already been performed. The second voyage under the Charter, which was made in 1591, is described in Hakluyt. The French had then traded in these parts for above 30 years, but the "Frenchmen never used to go into the river of Gambia, which is a river of secret trade and riches concealed by the Portugals".

The power of Portugal was, however, on the wane, and early in the 17th century the English established themselves in the Gambia and the French in Senegal to the north. For the following two centuries these countries contended with varying fortunes for the mastery of the two rivers, the coast ports between, and the trade of the hinterland.

In the 18th century the Royal African Company controlled the commerce of the Gambia, and made large profits on their cargoes of slaves and gold and ivory and beeswax.

Chartered Company administration was ruined by the Act of 1807, which abolished the slave trade, and although an annual subsidy of £23,000 was paid to the Company it was unable to make a profit, and its assets were taken over by the Crown.

Since 1816 the seat of Government has been at Bathurst, which was founded by the English merchants who left Senegal and the Island of Gorée when those territories were restored to France after the Napoleonic wars. It was named after the then Secretary of State for the Colonies.

The Colony, which comprises the towns of Bathurst and Georgetown and some adjoining land, has an area of only 69 square miles.

The Protectorate is a narrow strip of territory ten kilometres wide on each bank extending up the river for 250 miles from Bathurst. The Gambia River has its source near the village of Labé on the Futa Jallon plateau. It flows westward for about 700 miles. The river is navigable for ocean going steamers as far as Kuntaur, and for vessels drawing less than two fathoms as far as Koina, the easternmost village in the Protectorate, where there is a rise of two feet daily with the tide. During the rains the upper river rises some thirty feet. This year when the floods were exceptionally heavy the buildings at Basse, the largest market in the Protectorate in the dry season, were twelve feet under water.

The inhabitants of the Protectorate are mostly Jollofs, Mandingos, Fulas, and Jolas, nearly all of whom are Mahommedans, except the last named tribe who are pagan and lower in the scale of civilisation than the others.

The currency is British West African silver and alloy coinage and paper. Since the French five franc pieces were demonetised, little silver has been seen in the Protectorate. There was in circulation during the year about half a million pounds worth of alloy coinage, and notes to the value of £166,000. The monetary units and the standards of weights and measures are British, but the people are equally conversant with the metric system owing to their close contact with the neighbouring Colonies.

### I.—General.

On the 4th of February Captain Sir C. H. Armitage, K.B.E., C.M.G., D.S.O., left the Colony on retirement after six years as Governor of this Colony and after thirty-four years service in West Africa. His successor, Sir John Middleton, K.B.E., C.M.G., late Governor of the Falkland Islands, assumed the administration of the Colony on the 10th of March.

The three unofficial members of Legislative Council have been re-appointed by the Crown for a further period of five years. The Senior unofficial member, the Honourable S. J. Forster, has represented Bathurst like his father before him for over twenty years. He was made an M.B.E. on the King's Birthday.

After nearly forty years' residence in this Colony the Reverend Mother Joseph of the Congregation of St. Joseph of Chmy died in June. The deceased lady, who was highly respected, held the Membership of the Order of the British Empire. Her funeral was the occasion for a remarkable manifestation of public sympathy on the part of the whole community, Mahommedan as well as Christian.

## II.—Finance.

The revenue and expenditure for the last five years has been :—

<i>Year.</i>	<i>Revenue.</i>	<i>Expenditure.</i>	<i>Loans.</i>	<i>Surplus of Assets over Loans and Liabilities.</i>
	£	£	£	£
1923 ... ..	407,581	211,317	147,893	148,058
1924 ... ..	208,613	203,635	125,893	175,036
1925 ... ..	189,086	271,836	113,743	104,436
1926 ... ..	214,181	213,643	103,601	115,116
1927 ... ..	252,419	277,625	81,171	169,340

The revenue in 1923 included £177,893, part of a loan from the West African Currency Board to cover the loss on demonetisation.

The expenditure in 1925 included £32,546 for the writing off of the rice and seed nut debts of the Protectorate.

The expenditure in 1927 included the sum of £50,000 which was set aside for the establishment of a Reserve Fund.

The liability to the West African Currency Board incurred in 1922 was reduced during the year by £19,430.

Customs receipts, which represented 68 per cent of the total revenue of the Colony, brought in £172,887 as against £141,003 the year before.

A comparison of the four chief items of duty during the last five years indicates an improvement in revenue with an increased ground nut crop.

<i>Year.</i>	<i>Export Duty. Groundnuts.</i>	<i>Import Duty. Kolas.</i>	<i>Ad valorem Duties.</i>	<i>Tobacco.</i>
	£	£	£	£
1923 ... ..	60,622	37,301	36,516	15,308
1924 ... ..	57,572	29,231	18,867	11,172
1925 ... ..	46,124	23,016	16,821	10,748
1926 ... ..	56,966	32,925	23,348	11,855
1927 ... ..	64,342	44,795	26,797	17,347

The cost price of investments held at the close of 1927 was £247,246. The securities depreciation fund of £13,237 covers more than twice over the present depreciation of the surplus funds investments.

### III.—Production.

The total value of exports was £999,000. Except for palm kernels, 719 tons valued at £11,611, and hides, 28,316 valued at £9,288, the sole export of the Gambia is ground nuts, on which an export duty of £1 a ton, raised from 5/- in 1862 to 6/8 in 1874 and to its present rate in 1920, is levied.

The tonnage and value of the crop for the last five years has been as follows :—

<i>Year.</i>	<i>Quantity in Tons.</i>	<i>Value.</i>
		£
1923 ... ..	64,178	864,885
1924 ... ..	60,622	861,925
1925 ... ..	48,700	693,097
1926 ... ..	61,072	862,578
1927 ... ..	69,240	967,941

The main percentage distribution of the ground nut export trade during these years has been:—

<i>Year.</i>	<i>British.</i>	<i>French.</i>	<i>German.</i>	<i>Dutch.</i>
1923 ... ..	47	39	7	—
1924 ... ..	55	33	3	4
1925 ... ..	46	35	5	6
1926 ... ..	40	26	14	16
1927 ... ..	9	42	20	21

An increased crop of ground nuts was set off by a poor harvest of corn and other food stuffs, but the year was one of greater prosperity to the farmers, who repaid promptly the 700 tons of seed nuts and 920 tons of rice which were issued to them during the rains.

There are no accurate statistics of the amount of food stuffs grown in the Protectorate and consumed there. The rice and other crops suffer much damage from the depredations of wild beasts in spite of the issue of gun powder for shot guns on a considerable scale. There are still large areas of uncleared land in which such beasts take refuge.

Cattle disease was again rife in many districts and between fifteen and twenty thousand head were lost.

In the absence of expert opinion it is believed that pleuro-pneumonia, as in 1917 when the herds were decimated, was the cause. Whatever it may be the flesh of many animals dying of the sickness is eaten by the people without any ill effects.

#### IV.—Trade and Economics.

The following table shows the balance of trade (exclusive of specie) during the last five years :—

<i>Year.</i>	<i>Aggregate.</i>	<i>Imports. (c.i.f.)</i>	<i>Exports. (f.o.b.)</i>	<i>Balance of Exports over Imports in £.</i>
	£	£	£	£
1923 ... ..	1,736,967	790,013	946,954	156,941
1924 ... ..	1,563,059	669,700	893,359	223,659
1925 ... ..	1,338,548	615,927	722,621	106,694
1926 ... ..	1,555,303	651,137	904,166	253,029
1927 ... ..	1,862,376	863,376	999,000	135,624

The largest increases of imports were in rice and sugar,

—	<i>1926 Tons.</i>	<i>Value.</i>	<i>1927 Tons</i>	<i>Value.</i>	<i>Increase.</i>
		£		£	£
Rice ... ..	4,612	72,270	7,939	124,457	52,187
Sugar ... ..	925	18,504	1,310	33,961	15,457

whilst kola nuts showed a slight decrease in value.

—	<i>1926 Cwt.</i>	<i>Value.</i>	<i>1927 Cwt.</i>	<i>Value.</i>	<i>Decrease.</i>
		£		£	£
Kolas ... ..	17,459	98,473	24,002	97,967	506

Great Britain supplied most of the following goods :—

Apparel, bags, coal, cottons, metals, motor cars, oils edible and spirits potable.



From France were obtained most of the biscuits, boots, hats, rice, sugar, soap and wines, and from the United States flour, oils not edible and tobacco.

The percentage of imports for the last five years has been :—

—	1923	1924	1925	1926	1927
British Empire	69	54	55	60	52
France ... ..	13	17	27	25	31
Germany ... ..	7	16	8	3	6
United States	5	5	5	4	6

The progress of trade in 1927 may be briefly summarised as follows. Great Britain sold to the Colony merchandise to the value of £331,000 and took produce to the value of only £81,000, in which the principal item is 4,400 tons of ground nuts, and for this small quantity of the Colony's staple product a not less favourable market could readily be found elsewhere.

France sold merchandise to the value of £264,000 and purchased produce to the value of £420,000. Germany and Holland sold merchandise to the value of £48,000 and £11,000 respectively, and each purchased produce to the value of approximately £200,000.

### V.—Communications.

569 ships of 1,287,018 tons entered and cleared in 1927, as compared with 552 ships of 1,255,241 tons in 1926. 63 per cent were British, 11 per cent French, the remainder being of German, Norwegian, American, and Italian nationality. These figures however do not represent the share which British shipping takes in the carrying trade of the Colony. It is estimated that British ships do not bring more than two-fifths of the total imports, while practically all the produce of the Gambia is exported in foreign vessels and nine-tenths of it to foreign ports.

H. M. S. "Delphinium" visited Bathurst on three occasions during the year and in January the American yacht "Utowana", owned by Mr. Alison Armour of Chicago took a party of botanists up the river.

Navigation has been assisted by the opening of the light on Bijol Island.

Many small craft ply on the river and the Government has maintained a regular service of steamers which have carried over 15,000 passengers and a large quantity of freight during the year.

Since January a ferry service between Bathurst and Barra has been run as a private enterprise. Roads also have been improved in the Protectorate, and transport by lorry is now superseding donkey loads nearly everywhere, with the result that the duration of the actual buying season is much reduced and though it extends nominally from December to May most of the crop is sold by the end of February.

A slight increase was recorded in the number of letters handled during the year, 270,420 as against 263,957 in 1926. £12,000 more of money orders and £1,000 more of postal orders were issued, and the travelling post offices on the Government steamers are gradually doing more business.

Owing to the restricted facilities of communication the air mail service from Dakar to Europe was not so frequently available as in 1926.

The wireless stations up river at Basse, Kuntaur and Georgetown sent and received 6,541 messages as against 4,267 last year.

## VI.—Justice, Police and Prisons.

In the Supreme Court there were only 17 criminal cases, the lowest number for the last five years, but on the civil side 30 cases were decided as against 5 in 1926.

Since 1922 there has been a steady decline in the number of cases in the Police Magistrate's Court at Bathurst. A sharp rise in larceny cases from 54 in 1926 to 94 in 1927 has occurred, however, which was chiefly due to the large influx of foreign casual labour.

In the Protectorate the Native Tribunals have disposed of more cases than in previous years and their efficiency has been increased. The cautious member who is afraid of unpopularity should be heard to concur in the infliction of a severe sentence, and the old silent member who only opens his mouth to express agreement with the opinion of the president have given way to more useful men.

The main body of Police are stationed in Bathurst. There are three small posts at Georgetown, Basse and Fattoto. Warder duty is carried out by the Police at the Bathurst and Georgetown Gaols. They also act as firemen. Four fires broke out in Bathurst during the year. They were all quickly got under, as the water supply and pressure has been improved. An excellent Band is maintained by the Force, but it is difficult to induce suitable boys to join locally.

In the annual musketry course the figure of merit was 60 out of a possible 96.

The number of cases reported to the Police was below the average of the last five years, those for larceny representing nearly half the total dealt with.

The original Gaol at Bathurst stood in the square, and was converted into the electric power station two years ago. The present Gaol is situated along the Cape road and was built in the first instance as a Sanitary Isolation Station. The total number of prisoners admitted in 1927 was 354 and the daily average was 82, most of them short sentence men.

## VII.—Public Works.

The slipway is now under construction. It will, when completed, take ships up to 400 tons and will be available for the public as well as for Government craft. Electric haulage will be supplied from the Power Station. The installed power there consists of two 100 kilowatt sets and one 50 kilowatt set. The maximum observed peak load on the station is 103 kilowatts. A smaller plant is to be erected in order to give a continuous 24 hour service, as the absence of any appreciable day load has necessitated the addition of a smaller generating unit. All the principal establishments in Bathurst are now consumers of current for lighting purposes, and the demand from private persons in the town is growing gradually.

The scheme provided for the raising of pressure in the town mains for fire fighting purposes is operating successfully over the whole area supplied with pipe-borne water, and fire pressures can be raised four minutes after the receipt of an alarm.

The reclamation of swamp land at the back of the town has been carried on during the year. Progress has been much slower than was anticipated and the question as to whether dry filling should be substituted for dredging is under consideration.

## VIII.—Public Health.

In spite of abnormal rains, 77 inches having been registered at Cape St. Mary, which is nearly double the average of the last 40 years, the year passed without any serious visitations.

A new factor in the situation is that persons leaving infected areas in Senegal arrive in Bathurst within the ordinary incubation period owing to motor transport. Great vigilance therefore has to be exercised, and a heavy responsibility is thrown on the medical authorities whose labours would be materially lessened if it were possible to obtain a better trained staff of subordinates. Except for an attack of relapsing fever in the South Bank Province which caused over 200 deaths the health conditions in the Protectorate were good. Some thousands of out-patients attended the dispensaries at Kaur and Basse. Besides the work done on the spot by the dispenser a considerable number of cases, which otherwise would never have gone there, requiring hospital treatment have been sent to Georgetown. People are beginning to realise the benefit of hospital treatment at Georgetown, where 192 patients were received, apart from 3,152 out-patients during the year.

Bathurst with a population of 10,283 has a birth rate of 27.03 and a death rate of 34.71 per thousand. Thanks to the efforts of the Women and Children Welfare Clinic infant mortality has been reduced to 88 as against a rate of 317 per thousand for the rest of the community. Baby Day was a great success and has become an annual institution. The capacity of the Colonial Hospital in Bathurst has been heavily taxed with 788 in-patients and 13,799 out-patients.

### IX.—Education.

Before the standard of education in the Colony can be considered at all satisfactory it is necessary to raise the quality and status of the teachers and to secure the regular attendance of the pupils. Too many parents remove their children at an early age, and not more than 60 per cent of those in the elementary schools go higher than the fourth standard.

The number passing from elementary to secondary schools is small and during the year only 31 boys and 72 girls were on the registers of the latter. In Bathurst 1,531 children went to the affiliated schools and 264 to the Mahommedan school.

There is no system of kindergarten training, but physical drill has been introduced and has given a new interest to school life.

Two boys are being educated at Fourah Bay College, Sierra Leone, having won scholarships from the Gambia, and two boys succeeded in passing the Cambridge School Certificate examination.

Apart from Mahommedan bush schools the only education available in the Protectorate is at Georgetown. The Wesleyan Mission has

maintained a day school there for over a century and has 72 pupils on its books at the present time. On New Year's day the Armitage School for Mahommedans was opened at Georgetown, the buildings of the former Catholic School now closed down having been taken over by the Government and enlarged. Thirty-six boarders and forty-seven day boys are now on the books and it is expected that the numbers will soon increase. In addition to the Koran, a curriculum of practical use to the children, who are nearly all sons of farmers, has been drawn up, which includes elementary instruction in agriculture.

### X.—Lands and Survey.

A new rating list was compiled for the town of Bathurst as no general re-assessment had been made since 1922 when prices and values were at their height. Up to ten shillings a yard for freehold land near the main street is paid, but few freeholds now change hands in Bathurst, and until more land is reclaimed overcrowding is inevitable. Every available yard of land which is not freehold has been leased by the Government.

In the Protectorate there are no freeholds, but small lots for trading stations are leased for £3 a year and upwards.

There are 3 main types of land surface, consisting of undulating sand hills 41 per cent, plateau 27 per cent and river flats 24 per cent, water making up the remaining 8 per cent of the 4,000 square miles of the Gambia.

Ironstone ridges are a notable feature of the upper reaches of the river: there is but little soil on them. Where they give way to the light soil plains, the ground is excellent for ground nuts, koos, cassava and other food stuffs. A small secondary forest covers most of the area when not cleared for farms. The flats, as one proceeds up river, form good rice fields, but those near the mouth are useless for cultivation because of the extensive mangrove swamps.

The space available for production in the Protectorate is limited to about one half of the total area, but until an accurate survey is made no reliable statistics can be given.

### XI.—Labour.

In Bathurst there was no shortage of labour either skilled or unskilled, and the Government, which employs about 300 men, was able to carry out its programme without difficulty. The usual rate is 1/6 a day for a 47 hours week. The tendency for youths of the artisan class to seek clerical rather than manual work is as marked here as elsewhere.

In the Protectorate the land is cultivated not only by the owners but by a floating population of strange farmers who come from neighbouring Colonies, just as the Irish harvesters used to come to England, and return to their homes after the crop has been gathered. Their numbers vary according to local prospects and inducements. Since 1922 less than 20,000 have crossed the frontiers annually, but this year 17,237 were counted as compared with 13,553 last year.

## XII.—Miscellaneous.

Ten Ordinances and eight Regulations were passed during the year; none of them were of outstanding importance.

For the first time in the annals of the Gambia an inter-colonial cricket match was played at Freetown between representatives of this Colony and Sierra Leone. The result was a win for the Gambia by nine wickets.

C. R. M. WORKMAN.

*31st May, 1928.*

*Colonial Secretary.*

## APPENDIX I.

## Principal Firms, etc.

The following are the principal firms carrying on a general import and export trade :—

<i>Name.</i>	<i>Address.</i>	<i>Address in Europe (if any).</i>
African and Eastern Trade Corporation, Ltd.	Wellington Street	Royal Liver Building, Liverpool.
Etablissements Barthès et Lesieur.	"	8, Cours de Gourque, Bordeaux.
Bathurst Trading Co., Ltd.	"	34, Leadenhall Street, London, E.C.
Etablissements Maurel et Prom.	"	18, Rue Porte Dijaux, Bordeaux.
Compagnie Française de l'Afrique Occidentale.	"	32, Cours Pierre Puget, Marseilles.
Gambia Trading Co. ...	Buckle Street	23, Water Street, Liverpool.
Maurel Frères. ...	Wellington Street	6, Quai Louis XVIII, Bordeaux.
Louis Vézia & Co. ...	"	83, Cours de Verdun, Bordeaux.
Palmine, Ltd. ...	"	Moorgate Hall, Finsbury Pavement, London, E.C.
V. Q. Petersen. ...	"	—

All the above firms are represented on the Bathurst Chamber of Commerce.

## APPENDIX II.

## List of Barristers, Solicitors, and Patent Agents.

Barristers are entitled to practise as solicitors and *vice versa*.

\* S. J. Forster, M.A., B.C.L. (Oxon), Barrister-at-Law, Wellington Street.

\* I. J. Roberts, 6, Buckle Street.

\* M. J. R. Pratt, M.A., B.C.L. (Durham), Barrister-at-Law, Allen Street.

† G. K. Roberts, 6, Buckle Street.

S. Barlatt, M. A., B. C. L. (Durham), Barrister-at-Law, Leman Street.

W. D. Carrol, B. A., B. C. L. (Oxon), Barrister-at-Law, Picton Street.

G. S. W. Ladepon Thomas, Barrister-at-Law, Clarkson Street.

S. A. Benka-Coker, Barrister-at-Law, Allen Street.

\* Patent and Trade Mark Agent.    † Trade Mark Agent.







## COLONIAL ANNUAL REPORTS.

H.M. Stationery Office publishes the Annual Reports on British Colonies and Protectorates. These Reports appear each year and they are supplied at the Subscription price of 40s. per annum. Individual Reports may also be purchased and standing orders placed for their annual supply.

BAHAMAS.  
BARBADOS.  
BASUTOLAND.  
BECHUANALAND PROTECTORATE.  
BERMUDA.  
BRITISH GUIANA.  
BRITISH HONDURAS.  
BRITISH SOLOMON ISLANDS PROTECTORATE.  
BRUNEI, STATE OF.  
CAYMAN ISLANDS (JAMAICA).  
CEYLON.  
COLONIAL SURVEY COMMITTEE REPORT.  
CYPRUS.  
FALKLAND ISLANDS.  
FEDERATED MALAY STATES.  
FIJI.  
GAMBIA.  
GIBRALTAR.  
GILBERT & ELLICE ISLANDS.  
GOLD COAST.  
GRENADA.  
HONG KONG.

JAMAICA.  
KENYA COLONY & PROTECTORATE.  
LEEWARD ISLANDS.  
MAURITIUS.  
NEW HEBRIDES.  
NIGERIA.  
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NYASALAND.  
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## REPORT FOR 1927.

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# MAURITIUS.

## ANNUAL REPORT FOR THE YEAR 1927.\*

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### Situation and Area.

Mauritius lies off the coast of Africa, in the South Indian Ocean, some 500 miles east of Madagascar, between 57° 18' and 57° 48' E. longitude, and 19° 50' and 20° 31' S. latitude. Its official time is four hours fast on Greenwich (Ordinance 6 of 1906). Its extreme length is 38 miles, its extreme breadth 29 miles; and its area covers 720 square miles (460,800 acres). The density of population is very high, being about 550 persons per square mile for the whole island. The population at 31st December, 1927, was 401,693.

The largest town is Port Louis, the chief port and administrative capital, which has a population of about 43,000. The towns of the interior are all of recent growth. Curepipe, the residential capital, which lies at an altitude of 1,800 feet, situated on the

\* A sketch map of Mauritius will be found in the Report for 1926 (No. 1373).

highest part of the central plateau, has about 20,000 inhabitants. The smaller towns of Vacoas, Phoenix, Quatre Bornes, Rose Hill, and Beau Bassin in Plaines Wilhems District are situated at lower levels on the same plateau. The principal towns and villages in the other country districts are Mahebourg, Rose Belle, Souillac, St. Pierre, Moka, Flacq, Pamplemousses, Poudre d'Or, and Bambous.

The island is essentially of volcanic origin, although signs of an older formation are noticeable at some places (R. Thompson—1880). Its age is difficult to estimate owing to the misleading nature of the effects of cyclones and floods on its rocks. The deep river gorges, cut in hard basalt, point to considerable age, but all that can be said is that it is probably older than its immediate neighbours Reunion and Rodrigues, and certainly more stable (J. S. Gardiner).

The dependencies comprise a large number of small islands the nearest of which is 230 miles, the most northerly being about 1,200 miles away, 6° S. latitude. Rodrigues, the largest, with an area of 42 square miles, and an estimated population of 7,269, is 350 miles to the north-east of Mauritius, while lesser islands of some importance comprise Agalega, the Carcados Carajos group, and Diego Garcia, the largest of the Chagos Archipelago.

At the census of May, 1921, the population of the lesser dependencies was ascertained to be 1,810.

### History.

The Mascarene Archipelago was probably known to Arab navigators at an early date. A Dutch map copied from Arab sources shews the islands now known as Mauritius, Rodrigues, and Reunion under the names of Dinarobin, Dinanora, and Margabin, and it is possible that certain islands marked on Idrisi's map (1153) are intended to indicate them also.

There can be little doubt too that the island was visited by the Malays who colonised Madagascar in the 15-16th century.

But Mauritius history really begins with its discovery by the Portuguese in the beginning of the sixteenth century—probably between 1507 and 1512, but not later than 1527, when the island is shown on an official map under the name of Santa Appollonia, borne in common with the other islands known later as the Mascarenes (Reunion and Rodrigues) after the great navigator Dom Pedro Mascarenhas.

The Portuguese named the island Ilha da Cirnos or Swan Island, from the big birds resembling swans found on shore.

There is no record of any permanent settlement by the Portuguese who, for nearly a century, only used the island as a port of call for repairs and supplies.

The island was still entirely uninhabited when, on the 18th September, 1598, a Dutch squadron of five vessels anchored in



the South-Eastern Port to which the Commander, Admiral Wybrandt Van Warwyk, gave his own name. He took possession of the island on behalf of his Government and named it Mauritius, in honour of the Statholder, Prince Maurice de Nassau, but within fourteen days he set sail, leaving nobody on shore.

In 1613 the English seaman Captain Castleton, of the "Pearl," visited the island, which he found unoccupied, but it was only in 1638 that a first attempt at colonisation was made. On the 6th May of that year Cornelisz Simonsz Gooyer, appointed Governor of Mauritius by the "Compagnie Neerlandaise des Indes," landed at Warwick-Haven or South-Eastern Port. Fortifications, stores, and dwelling-houses were built at the place now called Old Grand Port, and thirteen families established themselves at the "13 Cantons" close by. These were followed by other settlers who established themselves in the neighbourhood, where Mahebourg now lies. Twenty years after, on the 16th July, 1658, the island was abandoned, and was again reoccupied on the 26th July, 1664. During this second attempt at settlement, which extended over a somewhat longer period, the fortifications and houses erected originally and which had been destroyed by a hurricane in 1664 were rebuilt. At Flacq some efforts towards development and cultivation were made without much success, whilst the district was only too successfully denuded of its ebony trees. A Royal Garden was created and new regions, such as Port North-West, Black River, and perhaps Plaines Wilhems, were inhabited, but the settlement did not prosper, and, discouraged by the difficulties of the enterprise, the Dutch finally abandoned the island in 1710. Their occupation was disastrous so far as natural resources were concerned, as the colonists denuded the forests of their valuable timber and almost exterminated the interesting natural fauna.

On the 20th September, 1715, Guillaume Dufresne, commanding the French vessel "Le Chasseur" arrived at Port Nord Ouest, took possession of the island in the name of Louis XV, King of France, and called it Ile de France. Settlement, however, was only effected six years later when, on the 23rd September, 1721, the Chevalier Jean Baptiste Garnier du Fouge-rai, commanding the *Triton* of St. Malo, resumed possession for the Compagnie des Indes Orientales after landing at Ile aux Tonneliers in Port Nord Ouest, which he named Port Louis. He was accompanied by a few French families from the neighbouring island of Reunion, who had come to settle, and from that time Mauritius never ceased to be inhabited.

In 1735, Mahé de Labourdonnais succeeded Mr. Dumas as Governor. He was a man of rare capacity and it is not too much to say that by his own teaching and example he laid the foundation of the future prosperity of the island. He left the island in 1747 and his successors had but to follow the path opened out to them to reap profit and success,

Conditions, however, soon became difficult for the settlers owing to the ever-increasing exactions of the "Compagnie des Indes," and the French Government was forced to assume direct control of affairs in 1764.

Under the new Government the burden of administration was shared between the Governor and an Intendant. The first of these, Pierre Poivre, introduced spices, then so valuable, from the East Indies, and created in 1767 the now renowned Royal Botanical Gardens of Pamplemousses on the site where Labourdonnais had erected in 1736 the fine dwelling-house of "Mon Plaisir," and planted fruit and ornamental trees introduced from India and Europe.

In 1790 Mauritius was to a great extent preserved from the commotions of the French Revolution owing to the unpopularity of the decree of the National Convention abolishing slavery, on which local agriculture solely depended. The Jacobean leaders and the agents of the Directoire sent to proclaim emancipation were expelled, a Colonial Assembly was elected, and nearly all links with the mother country were severed for some time.

A period of intense military activity under General Decaen during the earlier part of the reign of Napoleon followed, when the French privateers, using Mauritius as a point of departure for their activities against British trade, gained for the island its reputation, still enshrined in its motto as "The Star and the Key of the Indian Ocean." The reputation it had acquired became at length a cause of peril. After several indecisive attempts against the island, the English, determined to root out this rival base, prepared for a vigorous attack in 1810 and, after a memorable fight, Mauritius was lost to the French and came under British rule on the 3rd December, 1810.

The cession of the "Isle de France" and its dependencies to Great Britain was confirmed by the Treaty of Paris, and the island, under its former name Mauritius, has since 1814 remained uninterruptedly a British possession.

In 1835 the emancipation of slaves took place, but as this new class of free men refused occupation as labourers, the planters resorted to the introduction of indentured labour from India, which commenced in 1842 and continued practically without interruption until 1910.

In 1825 a Council of Government was established. It was modified in 1832 and reconstituted in 1884; it now consists of the Governor and 27 members, 8 being ex-officio, 9 nominated by the Governor, and 10 elected.

In 1864 the first line of railway was opened from Port Louis to Pamplemousses. Subsequently other lines were built, and the island is now served by a railway system of a total length of 119 miles, which renders access easy to most parts of the island.

In 1868, 1874, and 1892 the island was visited by very destructive cyclones. That of 1892 was one of the most violent ever recorded. It destroyed a considerable part of Port Louis (the capital), caused terrible damage throughout the island and involved a death roll of 1,232 people.

In 1854, 1856, and 1862, epidemics of cholera prevailed. In 1866 an epidemic of fever of great severity broke out, commonly regarded as malarial fever, although recent views appear to indicate that the high death roll then recorded (over 30,000 people) could not have been due to malaria alone. In any event, from about that time malaria, which was previously absent from the Colony, became endemic and has since rendered the lower parts of the island unhealthy. This does not, however, apply to the central tableland, where malaria is and has always been either absent or comparatively insignificant. The reduction of the incidence of malaria has been the subject of much investigation and sanitary effort on the part of the Government of recent years, and it is believed that these measures are having a pronounced effect on the general health of the community.

Between the years 1902 and 1909 the island suffered from a period of severe financial depression owing to the low market value of the staple product, sugar, which at that time prevailed. Matters were further aggravated in 1902 by an outbreak of surra which caused great loss of draught animals among the sugar plantations and necessitated the introduction of mechanical transport.

In 1909 a Royal Commission visited the island to inquire into the administration and finances of the Colony.

Mauritius was happily immune from direct action by the enemy during the Great War. A large number of recruits left for Europe for military service, and a Labour Battalion was recruited for service in Mesopotamia. During this period, the Imperial garrison was reduced to a skeleton, and the defence of the island was maintained by a locally-recruited Volunteer Force.

The great rise in the price of sugar which took place during and after the War brought prosperity to the Colony, and both Government finances and the general condition of the community were for a time far more prosperous than at any previous period of its history.

As a result, it has been possible to undertake great and material works for the improvement of the Colony, and a number of schemes of considerable magnitude have been inaugurated, including the amelioration of sanitary conditions, the improvement of the harbour, the extension and improvement of water supplies both for domestic and irrigational purposes, the improvement of the railways, and the extension of educational facilities.

During the last few years, however, the inflated prices caused by war conditions have disappeared and while, owing to the foresight of Sir Hesketh Bell, Governor from 1916 to 1924, a large sum of

money was put aside for improvement and development, the revenues of the Colony, although much diminished, have to provide for the carrying on of many important works undertaken in times of greater material prosperity.

### Languages.

The principal languages spoken in the Colony are English, French, Creole (a French patois), and Hindustani.

### Currency.

The rupee currency (silver rupee of India) which was established by Proclamation No. 23 of 1876 is still in force in the Colony. The monetary units are enumerated under Section II, Finance.

### Weights and Measures.

With regard to weights and measures, the metric system is in general use, but there are some special measures peculiar to Mauritius, the chief of which are :—

*L'arpent*.—The equivalent of 1.043 acres.

*La gaulette*.—A measure of length equal to 10 French feet. It is employed on the estates as a measure of work performed in the fields. The task given to a labourer corresponds to a certain number of *gaulettes*. The number of *gaulettes* of work per *arpent* varies according to the distance between the lines of cane holes.

*Le tiercon* is a measure of capacity for molasses : it varies from 190 to 192 litres.

*La toise* is a measure of length equal to 1.94904 metres (2 yards 4 inches English measure or 6 pieds French measure).

*La toise carree* (square *toise*) = 36 square feet French. This measure is used in job-contracts, masonry works, etc.

*L'aune* is a measure of length used in nearly all shops. It is equivalent to 1.191077 metres or about 1 yard and 11 inches.

The *aune* is generally counted as 1.20 metres.

The *corde* is employed for measuring stacked firewood. The wood is stacked in lengths of  $2\frac{1}{2}$  French feet and laid transversely, the stack measuring 4 French feet high, 8 French feet long, 80 cubic feet (French), 96.82 cubic feet (English) : 2.742 cubic metres.

*La bouteille* is a French measure for wine and is used locally for the sale of milk, vinegar, rum, etc. It is equivalent to 800 cubic centimetres ( $\frac{8}{10}$  litres).

*La chopine* is one-half of a bottle.

*La livre*.—A local measure of weight = 500 grammes or  $\frac{1}{2}$  kilogramme (1.10 English lb. roughly).

### **Climate.**

Situated just within the tropics and with no large land masses for many hundreds of miles in any direction, Mauritius enjoys a climate free from any violent extremes of weather except that tropical cyclones at times cause considerable damage to crops and more rarely to buildings. For the greater part of the year the so-called south-east trade winds blow gently over the island, tempering the tropical heat. These winds, carried over thousands of miles of warm sea before reaching Mauritius, are heavily laden with moisture which is easily condensed by the upward movement of the air over the hills, and the rainfall is sufficient from this cause alone to keep most vegetation green and abundant, especially in the higher parts of the island. On the other hand, this rain falls mainly in the form of showers of short duration: it interferes little with outdoor activities, and sunshine is plentiful. At times, and particularly in the summer months, December to March, the south-east trades fail and are replaced by the light variable winds of the "doldrums." The high humidity and nearly overhead sun then cause discomfort to Europeans, although the temperatures recorded are not high compared with those endured in Egypt or India. In the winter months the high humidity acts in a contrary manner and the nights, especially in the European residential districts between 1,300 and 2,000 feet, can feel unpleasantly cold with a temperature of about 50° F. Some of the residents who can afford to do so live inland on the hills in the summer months and by the sea in the winter months. Climatic statistics can be consulted in the many publications of the Royal Alfred Observatory, in the Mauritius Almanac, or in official Blue Books. Here it is sufficient to state that all temperatures measured at the Royal Alfred Observatory, 181 feet above sea-level, fall between 95° F. and 50° F. It will be noted that the upper limit is below the upper limit for London. The yearly rainfall varies from about 30 inches on parts of the coast to 150 inches on the high inland regions. Snow has never been seen on the hill-tops and hail is so rare as to be almost unknown. Thunderstorms are not very frequent and damage from lightning is uncommon. Fog is very rare except on the hill-tops.

Owing in part to the memory of the disastrous cyclone of 1892, in part to the entire absence of strong winds except during the approach of a cyclone, and the consequent flimsiness of the houses, and chiefly to the damage which may be caused to the principal crop of the island, the sugar-cane, cyclones occupy a place in the fears and conversation of the population out of all proportion to their importance. Cyclones have occurred in all months from October to May but mostly in the four months December to March. In general, about five per year can be expected to approach within 300 miles of the island and cause anxiety for two days each. Usually no damage is done until a cyclone approaches within 80 or 90 miles,

and the number of cyclones within this distance is considerably less than one per year. A graphic description of the catastrophe of 1892 can be found in *Blackwoods Magazine* for September 1892, which has been largely quoted in other places ("The Sugar Industry of Mauritius," Walter; and "Mauritius Illustrated," Macmillan). The effects of cyclones are not altogether harmful; the heavy rains associated with such storms are beneficial and indeed necessary to the sugar crop.

### I.—GENERAL.

In the early part of the year under review it was expected that the Colony would recover its economic prosperity after the period of depression which it had gone through during the two previous years. This expectation was not realised: the sugar-crop was much below the normal, while the prices obtained for this commodity left to the producers but little, if any, margin of profit.

As regards Revenue, a revision of the Customs Tariff has been effected, its main features being the exemption from import duty of certain additional articles of food, a moderate increase in the duties on certain articles of luxury, and the extension of the preference granted to imports from Great Britain; e.g., British cinema films are now imported free of duty, while the duty on British cars, lorries, etc., has been reduced from 12 to 5 per cent. It is also proposed to revise the scale of licences and to impose a tax on immovable property lying outside municipal and township limits.

His Excellency Sir Herbert Read, K.C.M.G., C.B., opened the second session of the Council of Government on the 3rd May, 1927, and, *inter alia*, made the following statements:—

"In view of recent experiences, it seems clear that some means must be devised for placing the main industry of the Colony on a more stable basis. One step in this direction has been recently taken by the appointment of a joint Committee of representatives of the Government and of planters to consider in what way the Government and the planters could co-operate in the improvement of the organization of the sugar industry. It is proposed that these conferences should be held annually, and it is generally agreed that nothing but good can result from them. At the same time, it is essential that the country should not neglect the other line of progress, namely, the development of subsidiary industries. It has now been established that Mauritius can produce tobacco—some of it of high quality—for which there is a strong demand in the United Kingdom. Commercial consignments are now being shipped home, while the area under cultivation is 1,100 acres and is rapidly increasing. As for aloe fibre, the central factory at Port Louis of the Fibre Growers' Syndicate is approaching completion, and

it may be confidently expected that this industry will shortly enter on a new phase of development. Satisfactory progress is also being made in some of the other subsidiary industries which are at present of less importance.

“ But, in order that the prosperity of the community as a whole may be further ensured, it is necessary to enlist, as far as possible, the co-operation of all, and I think, especially in view of the increasing demands which are being made for poor law relief, that the time has come to inaugurate a movement on the lines of the ‘ National Savings ’ movement in the United Kingdom. This movement was begun as a War measure, and during the ten years of its life Savings Certificates with a cash value of over £600,000,000 have been sold to the public. When to this amount is added the sums held by the Post Office Savings Bank and other institutions for the encouragement of thrift, the total amount of savings in the hands of small investors is now more than £1,000,000,000. Conditions in Mauritius are no doubt dissimilar from those in the United Kingdom, but I see no reason why a scheme to suit our circumstances should not be evolved, and I propose to appoint a small Committee to deal with the matter.

“ At the opening of the Session of May last year, I stated that there was an estimated deficit of Rs.1,700,000 on the working of the year 1925-26. I am glad to say that the actual deficit was only Rs.223,224. In the case of the Railway, I stated that there would probably be a small surplus for the same year. As a matter of fact, there has been a deficit of Rs.173,977, so that, taking the financial transactions of that year as a whole, there has been a total deficit of Rs.397,201. Having regard to the difficulties through which the Colony has been passing, I do not consider that this is an unsatisfactory result. The estimated deficit for 1926-27 is Rs.2,400,000, but, in view of what has just been stated with regard to the year 1925-26, we may reasonably hope that it will fall considerably short of this figure.

“ Turning now to the Budget for the year 1927-28, the Estimated Revenue is Rs.15,149,246, and the Estimated Expenditure Rs.16,744,690, from which should be deducted Rs.1,635,700 to be charged to Surplus Balances, leaving an Estimated Surplus of Rs.40,256. The Surplus Balance of the Colony on the 30th June, 1926, amounted to Rs.14,532,447, and it is estimated that on the 30th June, 1927, it will amount to Rs.12,132,447. The unspent balance of the Improvement and Development Fund, which stood at Rs.12,860,355 on the 1st of July, 1926, is expected to amount to some Rs.9,874,400 on the 30th of June, 1927. The Railway Draft Estimates have not yet been submitted by the Board.

“ As regards Revenue, proposals will be laid before Council for the revision of the Customs Tariff. The main features of the scheme are the exemption from import duty of certain additional articles of food with a view to benefiting the poorer classes, a moderate increase in the duties on certain articles of luxury, the extension of the preference granted to imports from Great Britain, and the abolition of the import duties on a considerable number of articles which only produce in the aggregate a very small amount of revenue. It is also proposed to revise the scale of licences with a view to distributing the burden of taxation more evenly among the different sections of the population.

“ The Nicoliere Reservoir has been completed and a certain amount of water which it is hoped shortly to increase is being distributed to the planters in the district. As you know, however, the reservoir cannot be fully utilised until the feeder reservoir at Midlands and the connecting canal have been completed. The Director of Public Works has prepared a scheme by which it is hoped that the time originally assigned for the construction of the latter works will be considerably shortened.

“ At the same time satisfactory progress is being made with the improvement of the supply of drinking water throughout the island. The main pipe-line from the great reservoir of Mare-aux-Vacoas is being duplicated, and the storage capacity at Port Louis is now four times as great as what it was two years ago. Much good work also has been done in the country districts, notably in the carrying out of the scheme for the districts of Riviere du Rompart and Pamplemousses. The cost of the scheme is estimated at Rs.912,000, and it is expected that it will be completed in two years.

“ A malaria campaign has been inaugurated on the lines suggested by Mr. MacGregor in his well-known report; measures are being concerted for dealing with the problem of tuberculosis, and the activities of the child-welfare organization are being extended. The sewerage scheme for Port Louis has been accelerated, and progress is being made with the introduction of improved sanitary arrangements in the other principal townships.

“ Reconstruction of the public roads proceeds apace, and the total length of tarred road is now approximately 47 miles. If the present rate of progress is maintained during the next three years, I venture to think that, at the end of the period, our road system will compare more than favourably with that of any other Colony in the Empire.



“ As regards the Harbour, it is estimated that Quay “ D ” and the contiguous Reclamation Area will be ready for use within twelve months, and that the rest of the Reclamation Area will be filled up within 20 months. Some 120,000 tons of spoil have already been removed from the Anchorage of the Harbour, so that a depth of 32 feet water at low tide is now available in four berths as well as in other areas. This, combined with the further dredging which will be undertaken when the Reclamation Area has been completed, will result in a great improvement of the facilities of the port.”

The great social event of the year was the visit to the Colony of Their Royal Highnesses the Duke and Duchess of York, who left behind them a memory which for years to come will be treasured by all classes of the population.

Their Royal Highnesses arrived in the Colony aboard H.M.S. “ Renown ” on 1st June and left on the 3rd. During their visit Their Royal Highnesses attended a race meeting which had been arranged by the Mauritius Turf and Jockey Clubs to give as great a number of the population as possible the opportunity of seeing Their Royal Highnesses, who drove round the greater part of the course and were given a most enthusiastic reception by a vast assemblage estimated at 50,000 persons. On the evening of the 1st June a Reception of a thoroughly representative character was held by the Governor at Le Réduit, and on the following day the Duke took part in a *Chasse*, or deer-hunt, which is the national sport of the Colony. The *Chasse* took place on the property of Mr. George Antelme, the son of the Mr. Leopold Antelme who organized the *Chasse* when His Majesty King George V visited the Colony in 1901.

All classes of the population vied with each other in extending to Their Royal Highnesses a warm welcome and displayed that hospitality for which the island is justly famous.

His Excellency Sir Herbert Read, K.C.M.G., C.B., left the Colony on leave of absence on 3rd August, 1927, and until the end of the year the Government was administered by Sir Allan Grannum, C.M.G., Colonial Secretary.

## II.—FINANCE.

The total revenue of the Colony for the financial year ended 30th June, 1927, amounted to Rs.14,682,806.77, being Rs.347,363.23 below the Estimates and Rs.1,211,956.60 below the revenue of the previous year.

The expenditure amounted to Rs.16,461,061.80, being Rs.271,420.80 above the Estimates and Rs.343,073.93 above the expenditure of the previous year.

Of the expenditure for 1926-27, Rs.4,911.973 were spent on Personal Emoluments and Rs.11,549.089 on Other Charges. The corresponding figures for 1925-26 were: Personal Emoluments Rs.4,715.862, Other Charges Rs.11,402.126.

The expenditure incurred during the year exceeded the revenue by Rs.1,778,255.03; the financial transactions of the Colony for the year 1926-27 showing therefore a deficit of Rs.1,778,255.03.

The following is a comparative statement of the revenue and expenditure for the last five years :—

<i>Years.</i>	<i>Revenue.</i>	<i>Expenditure.</i>
	Rs.	Rs.
1922-23 ... ..	23,314,734	21,685,665
1923-24 ... ..	19,888,554	16,188,735
1924-25 ... ..	19,672,843	17,355,868
1925-26 ... ..	15,894,763	16,117,988
1926-27 ... ..	14,682,806	16,461,061

### **Assets and Liabilities.**

The totals of Assets and Liabilities at the end of the year were Rs.43,327,543.61 and Rs.31,185,683.95, respectively, or a net surplus of Rs.12,141,859.66 on 30th June, 1927

### **Public Debt.**

No change took place during the year in the public debt of the Colony, which remained at £1,765,724. Against this liability there was an accumulated Sinking Fund of £887,181, as compared with £819,315 at 30th June, 1926.

The following is a statement of the public debt of the Colony :—

## PUBLIC DEBT OF MAURITIUS ON 30TH JUNE, 1927.—GOVERNMENT DEBENTURE AND INSCRIBED STOCK.

<i>Debts.</i>	<i>To Whom Due.</i>	<i>Rate of Interest.</i>	<i>When Incurred and for What Cause.</i>	<i>State Provisions for Payment of Interest of Sinking Fund and reference to Enactments by which it is made.</i>	<i>Amount of Original Debt.</i>	<i>Sinking Fund, Amount of Stock.</i>	<i>Market Value.</i>
					£ s. d.	£ s. d.	£ s. d.
Mauritius Railways and Mare aux Vacoas Water Supply.	Stock Holders.	4 per cent. per annum.	In 1888—To declare the terms and conditions applicable to loans authorised to be raised in England by the Government of Mauritius and to provide for the creation of Mauritius Inscribed Stock under the provisions of Ordinance No. 1 of 1887.	Under the provisions of the General Loan and Inscribed Stock Ordinance 1 of 1887—Sinking Fund of 1 per cent. per annum.	482,390 16 0	440,497 12 2	384,033 5 5
Hurricane Loan, 1892 (guaranteed by Imperial Government).	Stock Holders.	3 per cent. per annum.	In 1893—To meet the wants and necessities created by the Hurricane of the 29th April, 1892, and to provide funds for certain public works—Ordinances 4 and 12 of 1892.	Under the provisions of the General Loan and Inscribed Stock Ordinance 1 of 1887—Sinking Fund of 1 per cent. per annum and liable to be increased under Article 2 of Ordinance No. 12 of 1892.	600,000 0 0	465,863 7 10 <sup>3</sup> 3 7 4	385,752 0 3 <sup>3</sup> 3 7 4
Public Works Loan.	Stock Holders.	3½ per cent. per annum.	In 1904—To meet the cost of construction of Railways (Black River, Long Mountain, and Bois Chori lines), and certain drainage, and	Under the provisions of the General Loan and Inscribed Stock Ordinance 1 of 1887—Sinking Fund of 1 per cent. per annum.	150,000 0 0	58,367 0 2 962 8 10 <sup>3</sup>	48,707 12 11 962 8 10 <sup>3</sup>

La Nicoliere Irrigation Works Loan.	Debenture Bond Holders.	6 per cent. per annum.	Water Works, as well as the cost of a Dredger— Ordinance 19 of 1903. 49 of 1903-04, and 31 of 1904. In 1919 and 1920—To meet the cost of "La Nicoliere Irrigation Works"—Ordinance 8 of 1919 and 6 of 1920. In 1921 and 1923—To meet the cost of "La Nicoliere Irrigation Works"—Ordinance No. 24 of 1921. In 1923—To meet the cost of Drainage, Port Lonia, and the con- struction of Workmen's Dwellings—Ordinance No. 41 of 1922. In 1924—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1924. In 1925—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1925.	Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum. Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum. Secured on the General Revenue of the Colony (Article 2 of Ordini- nance 41 of 1922)— Sinking Fund 1-67 per cent. per annum. Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum. Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum.	33,333 6 8 (a)	15,782 2 3	14,909 18 6
La Nicoliere Irrigation Works Loan.	Debenture Bond Holders.	6 per cent. per annum.	In 1921 and 1923—To meet the cost of "La Nicoliere Irrigation Works"—Ordinance No. 24 of 1921. In 1923—To meet the cost of Drainage, Port Lonia, and the con- struction of Workmen's Dwellings—Ordinance No. 41 of 1922. In 1924—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1924. In 1925—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1925.	Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum. Secured on the General Revenue of the Colony (Article 2 of Ordini- nance 41 of 1922)— Sinking Fund 1-67 per cent. per annum. Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum.	33,333 6 8 (a)	11,809 19 7	10,957 15 1
Mauritius Loan, 1922.	Debenture Bond Holders.	6 per cent. per annum.	In 1923—To meet the cost of Drainage, Port Lonia, and the con- struction of Workmen's Dwellings—Ordinance No. 41 of 1922. In 1924—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1924. In 1925—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1925.	Secured on the General Revenue of the Colony (Article 2 of Ordini- nance 41 of 1922)— Sinking Fund 1-67 per cent. per annum. Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum.	333,333 6 8 (b)	27,448 7 10	24,462 6 10
La Nicoliere Irrigation Works Loan.	Debenture Bond Holders.	6 per cent. per annum.	In 1923—To meet the cost of Drainage, Port Lonia, and the con- struction of Workmen's Dwellings—Ordinance No. 41 of 1922. In 1924—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1924. In 1925—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1925.	Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum. Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum.	66,666 13 4 (c)	10,733 5 3 17 0 8*	10,551 6 11 17 0 8*
La Nicoliere Irrigation Works Loan.	Debenture Bond Holders.	6 per cent. per annum.	In 1923—To meet the cost of Drainage, Port Lonia, and the con- struction of Workmen's Dwellings—Ordinance No. 41 of 1922. In 1924—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1924. In 1925—To meet the cost of "La Nicoliere Irrigation Works"— Ordinance No. 16 of 1925.	Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum. Secured on the General Revenue of the Colony (Article 3 of Ordini- nance 8 of 1919)— Sinking Fund 5½ per cent. per annum.	66,666 13 4 (c)	8,147 9 1	6,834 13 8
					£1,765,724 2 8	£1,039,621 1 0	£887,101 16 5

(a) Equivalent of Rs. 500,000 at 1s. 4d. the Rupee.  
(b) Equivalent of Rs. 5,000,000 at 1s. 4d. the Rupee.  
(c) Cash Balances.

(a) Equivalent of Rs. 500,000 at 1s. 4d. the Rupee.  
(b) Equivalent of Rs. 1,000,000 at 1s. 4d. the Rupee.

No change took place in the method of raising revenue.

The following statements show the amendments made during the year to Schedule A of the Licences (Consolidating Ordinance, 1915), and to Excise duties on rum, denaturated spirits, and vinegar :—

AMENDMENTS TO SCHEDULE "A" OF THE LICENCES (CONSOLIDATING) ORDINANCE, 1915,  
BY ORDINANCE No. 29 OF 1927.

Item.	<i>Deletions.</i>		<i>Additions.</i>	
	<i>Nature of Licence.</i>	<i>Value half-yearly.</i>	<i>Nature of Licence.</i>	<i>Value half-yearly.</i>
/31	Merchant ... ..	Rs. 50	Private Club or Society of outdoor games only.	Rs. 50
5	Billiard Room Keeper ... ..	" 100	Keeper of a Refreshment Room ... ..	" 150
10	Retailer Consolidated ... ..	" 100	Private Club or Society ... ..	" 150
9	Keeper of a Restaurant ... ..	" 150	Keeper of a Railway Refreshment Room	" 250
9	Private Club or Society ... ..	" 200	Wholesale Dealer (not dealing in liquor)	" 250
4	Keeper of an Hotel ... ..	" 250	Retailer Consolidated ... ..	" 250
1	Keeper of a Bar ... ..	" 250	Wholesale Dealer (dealing in liquor) ...	" 300
5	Wholesale Dealer ... ..	" 250	Keeper of a Restaurant ... ..	" 350
8	Railway Refreshment Room Keeper ...	" 250	Keeper of an Hotel ... ..	" 400
1	Wholesale and Retail (Consolidated Licence) ... ..	350	Wholesale and Retail (Consolidated Licence).	" 400
3	Retailer of Liquor ... ..	500	Keeper of a Restaurant—selling liquor on or off premises.	" 400
<p style="text-align: right;"><i>Created by Government Notifications.</i></p> <p>Manufacturer of Oils ... .. Rs. 25—G.N. No. 28/27.</p> <p>Manufacturer of Medicinal Tinctures and Drugs. " 50—G.N. No. 281/27.</p>				

## EXCISE DUTIES.

## OLD LEGISLATION.

## PRESENT LEGISLATION.

## (1) RUM.

<i>Ordinance No. 18 of 1922.</i>		<i>Ordinance No. 31 of 1927.</i>	
	<i>Rs.</i>		<i>Rs.</i>
Duty per litre at 19 degrees Cartier ...	2.75	Duty per litre at 23 degrees Cartier ...	2.75
Additional duty per litre for every degree above 19 ... ..	0.15	Additional duty per litre for every degree above 23 ... ..	0.12

## (2) DENATURATED SPIRITS.

<i>Ordinance No. 7 of 1918.</i>		<i>Ordinance No. 36 of 1927.</i>	
	<i>Rs.</i>		<i>Rs.</i>
Duty per hectolitre at 36 degrees Cartier ...	5.00	Duty per litre at 36 degrees Cartier on denaturated spirits for heating and lighting...	0.04
Additional duty per hectolitre for every degree above 36 ...	0.05	Additional duty per hectolitre for every degree above 36 ...	0.04
		Duty per litre at any degree on industrial alcohol ... ..	0.04

## (3) VINEGAR.

<i>Ordinance No. 16 of 1901.</i>		<i>Ordinance No. 34 of 1927.</i>	
	<i>Rs.</i>		<i>Rs.</i>
Duty per hectolitre at 8 degrees Acetic Acid	1.40	Duty per hectolitre at 8 degrees Acetic Acid	1.70
Additional duty per hectolitre for every degree above 8 ...	0.18	Additional duty per hectolitre for every degree above 8 ...	0.18

## Currency and Banking.

The Currency of the Colony consists of :—

- (1) The Mauritius bronze coins of 1 cent, 2 cents, and 5 cents.
- (2) The Mauritius silver coins of 10 cents and 20 cents.
- (3) The nickel coins of 4 annas of the Government of India.
- (4) The silver rupees of India and their silver subdivisions of  $\frac{1}{4}$  Rupee and  $\frac{1}{2}$  Rupee.

(5) The Mauritius Government notes of R.1, Rs.5, Rs.10, and Rs.50.

(6) The currency notes of the Government of India of all denominations.\*

(1), (2), and (3) are legal tender up to Rs.5, and (4), (5), and (6) are legal tender to any amount.

The average value of currency notes in circulation during the year was Rs.14,185,000, as compared with Rs.15,460,500 in 1925-26.

The average amount of silver held by the Commissioners of Currency amounted to Rs.4,305,500, as compared with Rs.5,581,250 the average for 1925-26.

The investments (not including Depreciation Fund) which stood at Rs.9,879,250 on 1st July, 1926, remained the same during the year. The Depreciation Fund was increased from Rs.1,209,401 to Rs.1,335,806. The revenue (interest on investments, less addition to Depreciation Fund) was Rs.419,214, and this sum was credited to the General Revenue of the Colony.

The statement of assets and liabilities of the Commissioners of Currency shows a surplus of Rs.1,335,806. Valuing the investments at the market rate on 30th June, 1927, the surplus would be increased to Rs.1,387,685.

There was no change in the currency of the Colony during the year.

Government Savings Banks are established in the nine districts and in the dependency of Rodrigues, with a head office in Port Louis. The total number of depositors at 30th June, 1927, was 36,510, as against 36,481 in the preceding year, with deposits amounting to Rs.5,134,555 as against Rs.5,026,698 in the preceding year. The Savings Banks are largely made use of by the Indians, of whom at the 30th June, 1927, there were 15,431 depositors with Rs.2,287,355 to their credit, as against 15,450 depositors with Rs.2,225,859 to their credit on 30th June, 1926.

Interest is paid at the rate of 3 per cent. a year.

The Banks are the Mauritius Commercial Bank, the Mercantile Bank of India (Ltd.), and Barclays Bank (Dominion, Colonial and Overseas).

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\* *Local Money.*—Visitors to Mauritius are frequently nonplussed at the use of expressions by merchants and others, denoting money values which have no legal tender. The principal are as follows: "Cache," R. 0.02; "Marqué," (or sou marqué), R. 0.03; "Franc," R. 0.20; "Livre," R. 0.20. The dollar "Piastre," equivalent to Rs. 2, survives in auction sales.

The capital resources of these Banks are :—

<i>Name of Bank.</i>	<i>Paid-up Capital.</i>	<i>Rate % per annum of last dividend.</i>	<i>Amount of last half-yearly dividend.</i>	<i>Amount of Reserve.</i>
<b>Mauritius Commercial Bank</b>	Rs. 2,000,000	15%	7%	Rs. 1,840,000
<b>Mercantile Bank of India Ltd.</b>	£1,050,000	16%	£84,000	£1,385,000
<b>Barclays Bank (Dominion, Colonial and Overseas).</b>	£4,975,500	8%	—	£1,100,000

The following Ordinances relative to finance were passed during the year :—

(A) *The Paper Currency (Amendment) Ordinance (No. 9).* Enabling the investment of one-half the equivalent of notes in circulation in such securities as may be approved by the Secretary of State.

(B) *The General Loan and Inscribed Stock (Amendment) Ordinance, 1927 (No. 42).* Enabling the Governor with the approval of the Secretary of State to suspend further contributions to Sinking Funds, when the Trustees of the Fund are satisfied that no further contributions are necessary to redeem the loan when it becomes due.

### III. PRODUCTION.

#### Agriculture and Industries.

The industries of the island are entirely agricultural. The principal crop is sugar. The estimated area under sugar-cane at the commencement of 1927 was 162,102 acres; estate cultivation occupies 99,600 acres, and plantations off estates 62,500 acres. Of the area cultivated under sugar-cane, Indian planters comprise 72,500 acres, i.e., 44.7 per cent. Forty-four sugar factories operated during the 1927 crop. One factory will probably close this year.

Market conditions for sugar have continued to be unfavourable and the industry is traversing a difficult period in consequence.

Weather conditions were on the whole favourable during the year, but the crop amounted only to 216,000 tons, thereby causing a very marked falling off between the preliminary estimate and the crop harvested. It is believed that the deficit is largely due to the prevalence of disease, principally Gummosis on the White Tanna cane, which at present constitutes 56 per cent. of the total area cultivated. In consequence, considerable attention is being devoted to securing new varieties of cane for cultivation.



Sugar machinery to the value of Rs.1,087,302 was imported during the year, and tramway material to the value of Rs.418,620. Tractors and ploughs to a value of Rs.70,535 were imported, and there are now 111 tractors in the Colony.

The Sugar Planters' Syndicate, constituted under Ordinances Nos. 31 of 1920 and 7 of 1921, controlled more than 80 per cent. of the sugar produced by the Colony.

As in previous years, the bulk of the production went to the United Kingdom. Up to the end of 1927 the total export approximated to 123,600 tons, of which 110,100 tons had been shipped to the United Kingdom.

A further centre of infection of the destructive beetle *Phytalus smithi* was recorded in Flacq during the year. Control measures are being adopted. It is estimated that approximately 41,000 acres are now infested with the pest, but, as the result of the control measures adopted, appreciable damage is only recorded on about 2,500 acres.

In view of the difficulties encountered by the sugar industry, a conference representing the interests of the industry was held during the year at the instance of the Governor, with the assistance of the Director of Agriculture. The conference discussed a large number of points of importance in connection with the sugar industry. One of the results of the conference has been the establishment of the Sugar Industry Reserve Fund, which is created by means of a special tax of 4 cents of a rupee per 100 kilos. of sugar exported, as provided for by the Sugar Industry Reserve Fund Ordinance 1927 (No. 24); the object of the Fund being :—

- (1) To subsidize and encourage experimental installation of new machinery in sugar houses and in cane plantations ;

- (2) To finance an agency of the Chamber of Agriculture in England ;

- (3) To provide for the costs of visits of suitable persons of this Colony to other sugar-producing countries and of expert technologists from other countries to this Colony, and

- (4) To defray any expenses in connection with any other object which the Committee may consider beneficial to the sugar industry of the Colony.

*Research in relation to the sugar industry.*—A considerable amount of research in connection with the sugar industry was carried out by the Department of Agriculture. The work done comprised investigations on soil problems, on the manuring and cultivating of canes, on the raising and trial of new cane varieties, and on the control of insect and fungoid disease of cane.

As the outcome of the sugar conference alluded to above a technical conference is being arranged to be held in 1928 with the object of discussing the results of the research work performed and their increased application in practice on estates.

*Subsidiary Industries.*—As a result of the depression of the sugar industry, continued attention has been devoted to the development of the subsidiary industries, and marked progress can be recorded. In principle it seems clear that only those industries are worthy of attention which show possibilities of development as an export trade, inasmuch as entire reliance on the local market leads to instability as the result of dependence of home consumption on the staple industry, i.e., sugar, and also owing to abrupt fluctuations in price as the result of limitation of demand.

*Fibre Industry.*—Mauritius hemp is produced from the leaves of *Fourcroya gigantea*, a plant which grows well all over the island. The estimated area under Mauritius hemp is 20,000 acres. Quotations for prime were low during the year, hardly rising above Rs.320 per ton. The export for 1927 was 1,905 tons. An important event was the commencement of the operations of the Hemp Syndicate. The object of the Association was co-operation among planters to secure better grading and packing of the fibre and ultimately, by co-operative marketing, to secure better market conditions. The Syndicate controls a baling and grading factory, the cost of the erection of which has been supplied by a grant in aid of Rs.115,000 from the Improvement and Development Fund. The Government is represented on the Board of the Syndicate by the Director of Agriculture. The building is equipped with up-to-date machinery, including electrically-operated cranes and hydraulic presses. The improvement in the manner in which the fibre is presented for market, as the result of the Syndicate's operation, had already enhanced the price by the end of the year. With but few exceptions all fibre producers in the Colony have now adhered to the Syndicate.

Sisal cultivation on a commercial scale has been resumed at Grand Bay Estate, and the Robay machine belonging to the property is being operated. Sisal is also cultivated on a small scale by the Anglo Ceylon Co. at Stanley.

*Tobacco.*—Considerable developments took place in relation to this crop. At the end of the year, 2,000 acres were estimated to be under cultivation and the production of the Colony amounted to 321 tons of cured leaf. Practically all of this was taken up for local consumption, and various brands of local cigarettes are now consumed on a large scale. Attention was devoted to the possibility of organizing an export trade, and a tobacco export grading warehouse was started under the supervision of the Department of Agriculture. Under Proclamation No. 15 of 1927, the export of tobacco is prohibited unless it is accompanied by a certificate to the effect that it has been graded by the Government grading warehouse.

The warehouse commenced operations at the beginning of December, previous trial shipments having indicated that remunerative prices for Mauritius tobacco are likely to be obtained in England.

A Tobacco Growers' Association was inaugurated during the year and co-operated with the Department of Agriculture and the Government in various measures for the protection of the industry, including the control of disease and seed supply.

Provision for the imposition of an excise duty on locally-grown tobacco was made by Ordinance No. 46 of 1927, which also provides for the survey of manufacturers and curers of tobacco, a new industry capable of profitable development. There are now six firms manufacturing tobacco in Port Louis, of which the chief is the British American Tobacco Company.

*Pine-apple canning and Fruit preserving.*—There appear to be possibilities of development in this direction. Pine-apples grow well in Mauritius and scope exists for the establishment of an export trade for the canning of pine-apples. A committee, under the chairmanship of the Director of Agriculture, studied the question during the year and an officer of the Department of Agriculture was sent to South Africa to report on the industry in that country. Subsequently, a scheme for the inauguration of the industry was drafted and it is hoped that the proposals will result in the establishment of an export trade on some scale.

*Alcohol.*—688,077 litres were produced during the year. The modern plants at Medine and Richelieu continued operation, and a number of motor-lorries are now run on power alcohol. The recommendations of the Alcohol Commission for the remodelling of the existing Liquor Laws are expected to improve greatly the position of the industry.

*Oil crops.*—The Innova Refinery continued to operate during the year, mainly handling copra from oil islands. Various plantation companies in these islands are now devoting attention to the improvement of their properties. The copra production from the lesser dependencies averages 900 tons yearly.

*Tea.*—The industry continued in a depressed condition. The duty on imported teas was reduced from 60 to 40 cents. per kilo during the year. In the absence of the possible development of an export trade, the future prospects of this industry are not bright.

*Food-crops.*—Maize was grown on about 3,500 acres. There has been an appreciable increase of the area cultivated under vegetables, which may be approximated to 4,000 acres.

*Coffee.*—Some interest was shown in the question of coffee cultivation. The possibilities of organizing an export trade in this staple appear to be worth exploring.

*Vanilla.*—Little progress is recorded, although conditions are favourable for production. The opinion has been expressed that existing legislation which imposes severe restrictions on cultivation of the crop is acting as a bar to progress.

*Live stock.*—Proposals for assisting the live stock industry by the grant of Rs.30,000, to be administered by a committee under the chairmanship of the Director of Agriculture, were approved during the year.

The Government Dairy continued to operate. A committee to enquire into the undertaking was appointed. It is hoped that, as a result of the findings of the committee, the value of this institution in providing a milk supply of high purity, for use in hospitals and for private persons, will receive greater appreciation.

*Animal Diseases.*—The campaign for the eradication of surra was continued. 13,488 animals were examined for the disease during the year and 72 cases were detected. There were one or two minor outbreaks of the disease in the latter months of the year.

Red water fever occurred on two properties. Both outbreaks were satisfactorily controlled. A campaign for the control of bovine tuberculosis has been inaugurated.

*Agricultural Shows.*—A very successful agricultural show was held at Pamplemousses Botanical Gardens in September, 1927.

*Rodrigues.*—The Agricultural Experiment Station was maintained; special interest attaches to experiments in the cultivation of long staple upland cotton conducted thereat, the results of which appear very promising. Attention is also being paid to the cultivation of tobacco, food crops, stock, and re-afforestation.

*Co-operative Credit Societies.*—Co-operative credit societies are administered under Ordinance No. 4 of 1913; they are based on the Indian model. Numerous difficulties have been encountered in their administration, nevertheless it seems clear that, if properly administered, such societies are capable of accomplishing much useful work in the Colony.

On the 30th June, 1927, there were 29 societies and the total membership amounted to 2,861; the total working capital on the same date was Rs.310,328, a reduction of Rs.1,335 as compared with the year ended 30th June, 1926.

The following is a comparative statement showing the amount of the annual exports of the principal commodities of the Colony during the last five years :—

*Sugar.*

				<i>Tons.</i>	<i>Value. Rs.</i>
1927	...	...	...	227,989	53,789,928
1926	...	...	...	181,215	37,991,240
1925	...	...	...	192,303	41,250,907
1924	...	...	...	182,742	49,823,753
1923	...	...	...	223,051	67,227,562

***Aloe Fibre.***

				<i>Tons.</i>	<i>Value.</i> <i>Rs.</i>
1927	...	...	...	1,905	665,936
1926	...	...	...	2,577	838,980
1925	...	...	...	1,896	557,072
1924	...	...	...	1,093	413,819
1923	...	...	...	599	164,112

***Copra.***

				<i>Tons.</i>	<i>Value.</i> <i>Rs.</i>
1927	...	...	...	1,396	334,297
1926	...	...	...	1,000	284,960
1925	...	...	...	868	154,308
1924	...	...	...	746	224,117
1923	...	...	...	718	117,094

***Coconut Oil.***

				<i>Litres.</i>	<i>Value.</i> <i>Rs.</i>
1927	...	...	...	61,330	34,597
1926	...	...	...	67,997	43,126
1925	...	...	...	75,786	48,321
1924	...	...	...	64,362	50,761
1923	...	...	...	22,276	16,897

***Forestry.***

The total area of woodlands under the control of the Forest Department at the end of 1927 was :—

	<i>Arpents.</i>
A. Crown Lands ... ..	69,827.69
B. Private Forests under State Control—	
(1) Mountain Reserves ... ..	8,728.56
(2) River Reserves, about ... ..	6,000.00
(3) <i>Curatelle</i> Lands ... ..	17.00
(4) Waste lands of Port Louis ... ..	156.50
<b>Total</b>	<b>84,730.75</b>

showing an increase of 339 *arpents* 60 of Crown lands over last year. These new lands were acquired under the Land Purchase Scheme at a cost of Rs.87,360.

The output of the Forest Department disposed of from Crown lands during the year in favour of the public and of the Government departments amounted to 24,617 cubic feet solid of timber, and 165,000 cubic feet stacked of firewood, which shows an increase of about 11,700 cubic feet solid on last year's production, but a

decrease of 151,500 cubic feet stacked of firewood. The increase is due to utilization of eucalypts uprooted by cyclones.

In the formation of forest plantations on Crown lands a total expense of Rs.63,739.62 was incurred. About 350 *arpents* of new ground were re-stocked, chiefly with pines, eucalypts, and the ruling indigenous species, and 1,307 *arpents* of previous plantations were maintained at the same time. This shows a small increase of 85 *arpents* on last year's work, when Rs. 49,000 were spent on the creation of 265 *arpents* of new forest ground and the upkeep of 1,126 *arpents* of previous plantations.

The lumber trade of Mauritius is an important one, the average annual import of timber (boards, planks, scantlings, shingles, railway sleepers, and wooden manufactures) during the years 1922 to 1926 amounted to (a value of) about 2½ millions rupees. The imports of last year amounted to 7,337 cubic metres of boards, planks, and scantlings, worth Rs.603,356.00, 1,723,525 teak shingles, worth Rs.102,926.00, and 32,692 railway sleepers, worth Rs.227,460.00. The only local timber exported is ebony, which is now very limited and only exists in some Crown forests. In 1927, by special authority, a consignment of 11 cubic metres, worth Rs.2,915, from mountain reserves (private forests under State control) was allowed to be exported.

### **Fisheries.**

In 1926 Mr. James Hornell, F.L.S., F.R.A.I., late Director of Fisheries to the Government of Madras, was deputed by the Secretary of State to carry out a rapid survey of the Marine Resources of Mauritius and to submit recommendations for the improvement and development thereof.

Mr. Hornell arrived in the Colony in April and submitted his report in August, 1926. The report was laid before the Council of Government in November, 1926, and ultimately received the approval of the Secretary of State.

As an outcome of this report, a Permanent Advisory Committee was appointed in August, 1927, and the Committee is now studying the best practical means of putting into force the recommendations contained in the report.

The enforcement of the provisions of the Fisheries Ordinance is vested in the Receiver-General, and the whole is under the control of the Inland Revenue Branch of the Receiver-General's Department.

The fisheries industry now chiefly consists of lagoon fishing, sea fishing being much less resorted to than in pre-war days.

The outstanding features of the fishing industry (as reported upon by Mr. Hornell) are as follows:—

(a) The remarkable variety and natural abundance of good fish both in the lagoon area and in the open sea around the island.

(b) The undue concentration of fishing within the lagoon area, neutralizing in large measure the natural abundance of fish therein.

(c) The very great decrease from pre-war years in the amount of fishing done in the open sea.

(d) The lack of enterprise in the industry save in the exploitation of the lagoon area.

(e) The specially favourable conditions that prevail on the coast for marine fish-farming, coupled with the imperfect utilization of these opportunities.

(f) The absence of any important minor marine industries save lime-making from coral and the half-hearted fish-farming carried on in barachois.

Mr. Hornell has submitted a series of specific recommendations for the development and improvement of the fishing industry, including the creation of a Fisheries Department.

The Department proposed would attend to all matters relating to fisheries and would be under the guidance of a trained Superintendent, who should have qualified in Oceanography at the University of Liverpool and have made a stay of three months in India to study the organization and methods of the Madras Fisheries Department.

### Water Power.

The numerous rivers and streams of Mauritius flow generally through deep ravines, their courses being broken by many waterfalls and rapids. The following extract from the list of waterfalls will give some indication of the available water power in the Colony. It is estimated that 10,000 horse-power is available, of which 1,200 horse-power is utilized at present, principally for electric light service.

#### WATERFALLS MEASURED DURING THE DRY SEASON OF THE YEAR 1912.

<i>Name of River.</i>	<i>Name or description of Waterfall.</i>	<i>Height of Waterfall in feet.</i>	<i>Volume in cubic feet per minute.</i>
G. River, S.E. ...	Deschiens ... ..	19	1,530
do. ...	Diamamoo ... ..	63	2,315
G. River N.W. ...	Le Reduit ... ..	135	450
Savanne River ...	Cascade Cecile ... ..	105	580
do ...	Below Terracine Dam ...	77	250
Tamarind River ...	Sept Cascades ... ..	960	420
R. des Galets ...	Near Plaine Champagne ...	130	60
do. ...	Luchon ... ..	400	134
R. du Cap ...	Chamarel ... ..	320	330
R. Moka ...	Cascade Pigeons ... ..	160	80

**Manufactures.**

An account of the principal manufactures of the Colony has been given above. It may here be mentioned, however, that a brickfield plant which had been started by Government on an experimental basis is now being worked by private enterprise. The bricks produced are of good quality and some villas built of this material are already in existence.

**IV.—TRADE AND ECONOMICS.**

The total value of the overseas trade of the Colony in 1927 amounted to Rs.111,662,220, the value of the imports of merchandise being Rs.55,185,633 and that of exports Rs.56,476,587.

1927 was the first year since 1922 in which the value of the exports has exceeded that of the imported goods.

The Customs revenue from imports amounted to Rs.5,270,732, a slight increase on the revenue for 1926, and the revenue from the exports was Rs.1,875,637, against Rs.1,490,293 in 1926, the increase being due to a larger sugar crop.

**Trade.**

The comparative values of imports and exports of merchandise for 1913 and for the past five years are as follows :—

		<i>Imports.</i>	<i>Exports.</i>	<i>Total.</i>
		<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
1913	...	36,607,671	32,291,706	68,899,377
1923	...	76,835,565	69,841,931	146,677,496
1924	...	76,415,648	52,282,533	128,698,181
1925	...	61,682,844	44,478,894	106,161,738
1926	...	50,596,137	41,208,198	91,804,335
1927	...	55,185,633	56,476,587	111,662,220

The value of re-exports was Rs.1,660,091. Bullion and specie, amounting to Rs.1,598,387, was imported during the year, and the exports under that heading amounted to Rs.2,567,000.

**IMPORTS.**

The distribution of the import trade showed an increase of about 20 per cent. in the value of the imports from the United Kingdom over that of 1926; trade with Australia, Germany, China, Italy, Sweden, Spain, and Belgium also showed an increase; decreases are recorded in the case of Madagascar, Reunion, and Canada.

The principal items of the imports which showed an increase in 1927 over the preceding year are rice and grain, manures and fertilizers, cotton and woollen piece goods, spirits, oils (edible), motor-cars, lorries, bicycles, and agricultural tractors, cement, iron and steel manufactures, silk goods, boots and shoes, and unmanufactured tobacco. The following are the principal items in which



decreases are shown : coal, coke and manufactured fuel, manufactured tobacco and cigarettes, wines, paraffin, motor spirits and lubricating oils, and gunny bags.

The increase in the importation of unmanufactured tobacco and the decrease in the manufactured tobacco and cigarettes are due to the rapid progress made in the production and manufacture locally of tobacco and cigarettes.

The following statement gives the character and size of the trade in the principal articles imported in 1927 as compared with the preceding year :—

	1927.		1926.
Rice ... ..	59,607 Tons		52,964 Tons
Other Grain ... ..	22,307 "		17,623 "
Manures and Fertilizers ... ..	19,564 "		10,814 "
Coal, Coke and Patent Fuel ... ..	21,025 "		41,017 "
Cement ... ..	9,001 "		5,565 "
Cotton Manufactures ... ..	10,644,866 Metres		8,300,821 Metres
Woollen " ... ..	129,001 "		87,914 "
Wines in Cask ... ..	2,709,433 Litres		3,471,198 Litres
" in Bottle ... ..	96,121 "		141,536 "
Spirits ... ..	51,766 "		40,664 "

	1927.		1926.	
	No.	Rs.	No.	Rs.
Motor-cars ... ..	180	506,558	108	273,853
„ Lorries ... ..	5	88,541	66	166,561
Boots and Shoes ... ..	—	295,505	—	177,134
Haberdashery and Millinery...	—	900,933	—	890,345
Iron and Steel Manufactures	—	1,810,861	—	1,237,358
Silk Goods ... ..	—	489,548	—	242,138
Drugs ... ..	—	422,376	—	319,760
Wearing Apparel ... ..	—	671,230	—	556,184

#### EXPORTS.

Owing to a large crop the export of sugar in 1927 showed an increase over the 1926 figures and was the highest since 1922.

The figures for the past six years are as follows :—

		Value.
	Kilos.	Rs.
1922 ... ..	292,744,249	88,454,321
1923 ... ..	223,051,061	67,227,562
1924 ... ..	182,742,235	49,823,753
1925 ... ..	192,303,540	41,250,907
1926 ... ..	181,215,772	37,991,240
1927 ... ..	227,989,329	53,789,928

The principal domestic exports other than sugar were aloe fibre, valued at Rs.665,936; copra, Rs.334,297; coconut oil, Rs.35,247; and rum, Rs.20,055.

Re-exports amounted to Rs.1,660,091 and consisted chiefly of rice, gunny bags, wheat flour, lentils, and salted fish.

The following table shows the distribution of the imports, exports, and total trade with the United Kingdom, British Possessions, and foreign countries in 1913 and for the past five years :—

		<i>Imports.</i>					
<i>Countries.</i>		<i>1913.</i>	<i>1923.</i>	<i>1924.</i>	<i>1925.</i>	<i>1926.</i>	<i>1927.</i>
United Kingdom	...	33·2	30·6	31·9	27·4	22·2	23·6
British Possessions	...	42·6	40·8	36·9	45·1	48·5	47·2
Foreign Countries	...	24·2	28·6	31·2	27·5	29·3	29·2
		<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0
		<i>Exports.</i>					
United Kingdom	...	18·5	94·6	23·7	61·9	87·4	92·4
British Possessions	...	77·0	4·2	69·2	29·2	7·5	5·3
Foreign Countries	...	4·5	1·2	7·1	8·9	5·1	2·3
		<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0
		<i>Total Trade.</i>					
United Kingdom	...	26·3	61·1	28·8	42·0	51·5	57·8
British Possessions	...	58·7	23·4	50·0	38·4	30·1	25·3
Foreign Countries	...	15·0	15·5	21·2	19·6	18·4	16·9
		<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0

## V.—COMMUNICATIONS.

### Shipping.

The following shows the number and tonnage of vessels using the port (excluding the coasting trade) during the past three years.

			<i>Inwards.</i>		<i>Outwards.</i>	
			<i>No.</i>	<i>Tonnage</i>	<i>No.</i>	<i>Tonnage.</i>
1925	...	...	234	632,951	229	619,221
1926	...	...	187	508,555	194	541,120
1927	...	...	224	622,936	226	625,524

In the coastal trade with the dependencies there were 21 vessels inwards of 8,461 tons and 20 vessels outwards of 7,873 tons.

The principal lines of steamships represented by vessels calling at Port Louis were the Union-Castle Steamship Co. Ltd., the British India Steam Navigation Co., Ltd., the Messageries Maritimes, the Clan Line, the Ellerman Harrison Line, the Compagnie Havraise Peninsulaire, and the Mogul Line.

### Railways.

The Mauritius Government Railway, exclusive of Bois Cheri Light Railway, is 120 miles in length. The gauge of the main line is 4 feet 8½ inches.

Earnings amounted to Rs.3,269,391, as against Rs.4,048,616 for the previous year, a decrease of Rs.779,225. Comparative figures are :—

		<i>Previous year.</i>	<i>This year.</i>	<i>Decrease.</i>
Coaching Revenue	...	Rs. 1,964,053	1,663,325	300,728
Goods Revenue	...	Rs. 1,813,930	1,293,970	519,960
Goods Tonnage	...	542,296	480,969	61,327

The working expenditure amounts to Rs.3,364,687. In view of the reduced revenue earned, every effort was made to reduce expenditure, with the result that there is a reduction of Rs.495,893 as compared with expenditure for the previous year. Comparative figures are :—

			Rs.
Working expenditure, previous year	...		3,860,580
Working expenditure, this year	...		3,364,687
Decrease	...	...	Rs. 495,893

This reduction is due to a large extent to the reorganization of the Railway Department, brought into force on 1st July, 1926, which provides for increased supervision and modern railway accounting.

The excess of working expenditure over earnings thus amounts to Rs.99,296. After making provision for pensions depreciation, etc., the total deficit for the year amounts to Rs.808,936.08.

Engine power has been considerably augmented by the purchase of three Garratt locomotives, which replace five engines taken out of commission. The Garratts were utilised for the haulage of this year's sugar-cane crop, which was transported with celerity and ease, thus demonstrating the utility of these large machines. Bois Cheri Light Railway revenue amounted to Rs.26,936, as against Rs.32,750 for the previous year. The fall in revenue, Rs.5,814, is explained by reduced rates brought into effect to combat road competition and as an inducement to planters to cultivate more extensively. Better results are expected next year.

A collection and delivery service was inaugurated on 6th December, 1926. The revenue for the period ended 30th June, 1927, amounts to Rs.10,276. This marks the opening of the railways campaign against the competition of road transport, which has seriously affected railway earnings.

### Roads.

The island is well served by a system of water-bound macadam roads. They are divided into two classes: (a) main roads of a total length of about 441 miles, which are maintained from the general revenue of the Colony, and (b) branch roads of a total length of about 193 miles, which are maintained by the District

**Boards** from a contribution made from the general revenue of the Colony.

The roads are constructed of hard basalt stone which is abundant in all districts in the island, and have been able to sustain heavy traffic. But the ever-increasing traffic, both of motor-cars and heavy lorries, has rendered the improvement of the roads imperative. This is effected by tar-spraying, and the tar-sprayed roads have sustained very well the heavy traffic. Up to the end of the year under review 59½ miles of main roads have been improved and tar-sprayed.

### **Posts and Telegraphs, Telephones, etc.**

Postal communication between Europe and Mauritius is maintained chiefly by the Messageries Maritimes packets, Mauritius being the terminus of the Ligne de l'Océan Indien, whereon ten units ply, leaving Marseilles, in rotation, at 14 days' interval.

In order, however, that the course of transit may be shortened, an agreement has been concluded between the Messageries Maritimes Co. and the Colony, whereby, in return for a sum of £7,000. the packets, twenty-six times annually, steam from Tamatave direct to Mauritius, and proceed to Reunion after landing mails and passengers at Port Louis. They then return from Reunion to Port Louis to collect mails and passengers for the homeward voyages.

By this route, mails from Europe are expected to arrive in 32 or 33 days.

Castle Line steamers visit the island, on the average, once every five weeks, sometimes more often. They provide the principal means of communication with South Africa and with Europe via the Cape of Good Hope.

The Clan Line and the Compagnie Havraise Peninsulaire usually supply, at irregular times, further opportunities, also cargo steamers coming for the sugar trade.

Mails to and from Asia, Australia, etc., are conveyed by eight or 10 liners, yearly, of the British India Steam Navigation Co. and by some other vessels trading between the island and India or the Far East. In the absence of any of these ships, outward mails are sent via Zanzibar, by the Messageries Maritimes regular packets.

The total foreign correspondence passing in and out the General Post Office, Port Louis, in 1927 was, approximately, 571,253 ordinary letters and postcards; 226,520 newspapers, books, etc.; 17,554 commercial papers; 15,480 samples of merchandise; and registered articles to the number of 82,869, and 642 insured letters.

Postal parcels up to 21 lb. in weight are exchanged with Great Britain and up to 10 kilogrammes with France. With other countries, the exchange is limited to weights of 11 lb. and 5 kilogrammes.

Including C.O.D. (exchanged with Great Britain only), parcels handled in 1927 numbered 26,181, of the total value of Rs.917,430,

or, in sterling, at the conventional rate of 1s. 4d. the Rupee, £61,162.

The above correspondence and parcels were conveyed by 26 Messageries Maritimes, 10 British India, 13 Castle Line, and 169 other vessels.

Two branch post offices in Port Louis and 61 country offices shared in the collection and distribution of these letter and parcel mails, but the latter offices to a comparatively small extent. Except those in the principal inhabited centres, and numbering about fifteen, the country post offices are almost exclusively engaged in local business, comprising inland correspondence, telegrams, and money-orders.

At any of these offices, however, a money order on London, Paris, South Africa, or India, etc., may be purchased or a British postal order cashed; and, save at four, a cablegram to any place served by a cable may be handed in as also may a radiotelegram to Reunion or Madagascar or to a ship at sea within a range of 600 miles. Telegraphic money-orders are obtainable on Great Britain and India at the General Post Office, Port Louis, and British postal orders at the General Post Office and the larger inland offices.

By arrangement between the local Government and the Eastern and South African Telegraph Co., whose premises and offices are in Port Louis, messages originating from or addressed to places other than Port Louis are transmitted over the Government land-telegraph lines. These messages are transmitted between the hours of 6 a.m. and 6 p.m. on ordinary weekdays and from 7 a.m. to noon on Sundays. The cable office is open on weekdays from 7 a.m. to 7 p.m. and on Sundays from 8 a.m. to noon.

The Company also maintains a station in Rodrigues, the principal dependency of Mauritius.

The wireless station, installed by the Royal Navy and now leased by Government, is at Rose Belle, 25 miles from Port Louis. It was opened to public traffic in March, 1924. Messages to and from the station are transmitted over the land telegraphs. 1,923 messages were received in 1927 and 1,028 forwarded. The hours of services at the station are :—

*Greenwich*

*Mean Time.*

*Mauritius Time.*

4-6	...	...	...	...	8 a.m. to 10 a.m.
8-10	...	...	...	...	12 a.m. to 2 p.m.
12-16	...	...	...	...	4 p.m. to 8 p.m.
16-18	...	...	...	...	8 p.m. to 10 p.m.

The land telegraphs are worked by the Post Office but the 360 miles of line are maintained by the electric branch of the Railway Department.

The number of private messages put through in 1927 was 28,386 which, at the rate of 12 words for R. O.25, plus extra charges for delivery, fetched Rs.28.626.

There is a marked slackness in the use of telegrams, probably attributable to the extension of the telephone service (owned by a private company) to country districts.

The electric branch of the Railway Department also maintains the Government telephone, a small system at first set up to connect the Government offices in Port Louis. The Government telephone has now been linked, through its exchange at the Colonial Secretary's office, to the public system owned and worked by the Oriental Telephone Co. and spreading its network over Port Louis, Plaines Wilhems, and Moka, the three districts more important in regard to population and development.

Except savings bank transactions, the Post Office in Mauritius carries on every class of business within the ordinary scope of this section of the public service elsewhere. The revenue collected in 1927 was Rs.356,221, against which, expenditure amounting to Rs.305,282 (including salaries of staff) being set off, a clear profit of Rs.50,939 is left.

## VI.—JUSTICE, POLICE, AND PRISONS.

### Justice and Crime.

Justice is administered in Mauritius by the Supreme Court, sitting in Port Louis as a Court of Civil and Criminal Justice, and having the power of the King's Bench in England and of a Court of Equity; and in the nine Districts by the Magistrates' Courts, having likewise a limited civil, criminal, and stipendiary jurisdiction.

In 1927, the Supreme Court dealt with 334 civil matters out of 660 which were brought before it, as against 399 out of 711 in the previous year, distributed as follows :—

- 53 actions of Rs.1,000 and over.
- 45 appeals.
- 35 petitions in divorce cases.
- 155 motions.
- 31 Bankruptcy notices.
- 15 Bankruptcy petitions.

In 1927, 25 persons were brought before and tried by the same Court, sitting as a Criminal Court, out of whom 23 were convicted as follows :—

Attempt at Murder	...	...	...	...	...	1
Manslaughter	...	...	...	...	...	7
Rape	...	...	...	...	...	1
Other offences against the person	...	...	...	...	...	9
Malicious injury to property	...	...	...	...	...	5.

the percentage of acquittals being 8.

In the Magistrates' Courts 18,177 persons were brought before the District and Stipendiary Courts and before the Benches of Magistrates (three Magistrates having a wider criminal jurisdiction) and dealt with as follows :—

Acquitted or discharged by the District Magistrates	1,424
Convicted ... ..	16,560
Committed to the Assizes ... ..	34
Acquitted or discharged by the Stipendiary Magistrates ... ..	77
Convicted ... ..	82
	<hr/>
	18,177

### Police.

(a) *The higher standard of education required.*—During the year difficulty has been experienced, as in years past, in obtaining men of a standard of education sufficiently advanced to keep pace with the changing conditions of all classes of the Colony, for, in Mauritius, as in practically every other part of the world, criminals have shown an increasing skill in carrying out their activities.

To counteract this, a Cadet Corps has been formed, composed of 20 young men of good education and standing selected from the general population, and, in the event of the Corps proving a success, it is intended to increase the number.

(b) *Communications.*—There are 56 police stations distributed throughout the Colony, 22 of which are connected with telephones. The importance of this has been many times proved.

(c) *Bandsmen.*—The Police Force possesses a fine band under a European bandmaster. The majority of the bandsmen were recruited in India, most of them being ex-military bandsmen. Constant demands by the general public are made for their services, which are greatly appreciated. Besides private performances, they occasionally play at the different hospitals and the asylum.

(d) *Commission of Enquiry.*—A Commission of Enquiry was appointed during the year at the request of certain Members of the Council of Government.

(e) *Dangerous Criminals.*—During the course of the year, a heavy task was laid on the Police in breaking up and bringing to justice a noted gang of criminals who were armed and had for long terrorised the population. Since the breaking of this gang, serious crimes have decreased to a great extent.

(f) *Institution of Photographic and Modus Operandi Bureau.*—A system of photographing dangerous criminals has been instituted, as well as a *Modus Operandi* Bureau. A careful record is kept and a card index used for ready reference.

(g) *Police Circular.*—A Police Circular is issued daily and distributed to all stations of the island. It contains all known

offences or anything of interest from a police point of view which has occurred within the last 24 hours. Special attention of all ranks is called to this Circular, men are questioned on it occasionally and it has been remarked that these Circulars have a marked effect in keeping all ranks up to date and in keeping their police sense alive.

(h) *Opium, Gandia, and Cocaine smuggling*.—During the course of the year, a few cases of possession of opium and gandia were detected. The smuggling of opium is still common amongst the Chinese population and in spite of the heavy punishments inflicted there is little decrease of this offence.

The usual method of smuggling opium is by boats coming from China, India, Singapore, etc. It is not brought into ports but is passed on to plying boats out at sea and landed at different parts of the shore, which makes the detection difficult.

Gandia is imported from India and also cultivated in out-of-the-way places in different parts of the island.

No case of illicit possession of cocaine was detected during the year.

### Prisons.

There are two prisons in the Colony, one in Port Louis and one at Beau Bassin. The Port Louis Prison is the receiving prison, where all persons are admitted and discharged.

All persons awaiting trial and under remand are located in this Prison. It contains 154 cells for males. There is also a special yard for females, containing 9 cells.

On admission, all long-sentence prisoners and those sentenced to hard labour are transferred to Beau Bassin Prison and those sentenced for non-payment of fines and simple imprisonment are kept in the Port Louis Prison.

The Central Prison, Beau Bassin, is situated at a distance of about 8 miles from Port Louis. It contains 756 cells for males only. In addition to this, there are the punishment cells, 8 in number, for the confinement of prisoners undergoing punishment for prison offences.

The long-sentence prisoners, after undergoing their solitary confinement, are taught various trades. The profit on the work done in 1927 by the different workshops was Rs.2,244.79.

There is a bakery with two large ovens, which supplies bread and biscuits to all Government institutions.

About 12 acres of land on the southern and western sides of the Prison are under cultivation as a kitchen garden. On the 18th November, 1922, a poultry farm was started.

*Criminal statistics*.—There were 1,793 persons committed to prison during the year, i.e., 201 less than in the previous year. Of the total, 1,698 were males and 95 females.



The total number in custody on 31st December, 1927, was 366, as against 353 in the preceding year. The number of juvenile offenders was 86, as against 89 in the previous year.

*The Industrial School.*—The new Industrial School of Beau Bassin was started in November, 1922. The buildings are spacious and can accommodate 250 boys. The grounds are extensive and suitable for outdoor recreation.

The boys are trained as carpenters, tinsmiths, masons, shoemakers, and gardeners, and receive moral and religious instruction and a primary education.

## VII.—PUBLIC WORKS.

The following are the main works which have been started or on which progress has been continued during the year under review :—

*Buildings.*—Work was concentrated on the improvements to hospitals (Mental and Victoria Hospitals) and on the construction of three new primary schools.

*Water Supplies.*—Great improvements were made in the water supply of the island. In the past, a large number of villages derived their supplies from surface wells, by means of rope and buckets, or from open canals made in earth.

The water supply of the district of Plaines Wilhems from the Mare-aux-Vacoas has been further improved by the addition of 2 filter beds, the duplication of the 16-inch power main, and the extension of service pipes.

A new scheme for the water supply of the northern districts of Pamplemousses and Riviere du Rempart was started to serve a population of over 30,000 inhabitants. Twenty miles of pipes were laid, public fountains were erected, and private supplies granted.

The water supplies of the village of Pamplemousses and the district of Grand Port were improved by the enlargement of the mains and the extension of service pipes.

The district of Savanne, part of Moka, and the upper part of Flacq have also benefited from new water supply schemes.

*Drainage Works, Port Louis.*—The laying of sewers within the town of Port Louis was continued, along with house-service connections.

*Irrigation Works.*—Work continued on the dam at Midlands Reservoir, which will have a total capacity of 702 million cubic feet and will provide, when completed, for the irrigation of 12,000 acres in the northern districts.

At the same time, the construction of the main feeder channel and distributary channels was continued.

## VIII.—PUBLIC HEALTH.

### Vital Statistics.

The estimated population of the island on the 31st December, 1927, was 401,693, or an increase of 3,457 on the previous year's figures and of 25,208 on the last Census figures (20th May, 1921).

The numbers of births and deaths during the year were 13,748 and 10,015 respectively.

The birth-rate in the general population was 36.7 and in the Indian population 33.6 per *mille*, as against 41.8 and 38.4, respectively, for the previous year.

The death-rates per 1,000 in the two populations for 1927 were 23.6 and 25.8, as against 25.0 and 25.4, respectively, for 1926.

The highest death-rate for 1927 is shown in Pamplemousses (33.2) and the lowest in Plaines Wilhems (18.1). The death-rate for the whole Colony was 25.1 per *mille* as compared with 26.4 in 1926, and the rate for Port Louis was 27.7, as against 28.0 in the previous year.

### Public Health.

Taking into account the composition of the population and its high density, the death-rate for the whole Colony is reasonably low. But the statistics of deaths in tropical countries do not generally bear any fixed ratio to the amount of sickness in the population, and it is the morbidity of the people more than their mortality that is of greatest importance to communities in normal times.

There are no adequate data for the assessment of morbidity rates in the Colony, but it is a commonplace observation that the majority of the dwellers in the rural districts are not getting the best out of life. Intestinal parasitism saps much of their strength. It is no exaggeration to state that 95 per cent. of the persons living in the rural districts harbour intestinal parasites of some description. The most dangerous of these is the hookworm. Measures for the relief and control of hookworm infection in the Colony were begun in 1922, when the International Health Board of the Rockefeller Foundation kindly consented to undertake a co-operative campaign with the Colonial Government. The co-operative period ended in 1925, since when the Colonial Government has continued the work. Progress, however, has necessarily been slow.

Malaria is the other great cause of sickness in the Colony. There is little doubt that its influence is enhanced by the debilitating effects of the hookworm infection, and by the generally low standard of living existing in rural areas. It is almost negligible as a cause of ill-health among the wealthier classes of the community, who reside in the districts of Moka or Plaines Wilhems.

During 1927 an investigation has been made into the extent of tuberculosis in Port Louis and it has been found that the disease

is much more widespread than was previously supposed. Fortunately, the acute septicaemic type of the disease is not common, and it would appear that some form of natural immunity has been developed, similar to that now existing in Europe.

The diseases specially associated with the tropics are comparatively rare so far as present knowledge goes to show. The pathology of Mauritius is more characteristic of sub-tropical or temperate regions than of the tropics.

The following Ordinances relative to public health were passed during the year :—

- (1) The Medical Practitioners Ordinance, 1927 (No. 14), and
- (2) The Medicinal Tinctures and Drugs Ordinance, 1927 (No. 35).

*The Medical Practitioners Ordinance, 1927 (No. 14)* settles a long-standing controversy dating many years back. Its main object is to ensure that only those medical practitioners will be entitled to exercise the practice of medicine in Mauritius who are holders of (i) degrees or diplomas registrable in the United Kingdom; (ii) state degrees of Doctor in Medicine of any of the Faculties of France.

*The Medicinal Tinctures and Drugs Ordinance, 1927 (No. 35)* provides for the control of alcohol manufactured in the Colony and issued for the local preparation of certain pharmaceutical products—a new industrial use of the local product.

## IX.—EDUCATION.

### Primary Education.

Primary education, though not compulsory, is provided free by Government and State-aided schools which are open to all children of the Colony.

At the close of the year, there were 151 primary schools, 57 Government and 94 denominational, assisted by Government grants. Of the latter, 65 were Roman Catholic, 19 Church of England, 2 Presbyterian, 5 Hindoo, and 3 Mohammedan. The average attendance was 23,183, as compared with 24,671 in 1926. The number of Indian children on the roll was 16,601 (boys 13,728, girls 2,873), a decrease of 1,496 on the previous year. The total number of girls educated in primary schools was 10,266, as against 10,349 in 1926.

Six junior scholarships and six junior exhibitions entitling the holders thereof to free tuition at the Royal College for a maximum period of eight years are awarded to boys of primary schools every year on the results of a competitive examination, the winners of a scholarship receiving money payments at the rate of Rs.120 a year in addition.

A Senior Bursary Class for primary school boys was established in 1926. The course of study in this class extends over a period of two years, at the expiration of which four scholarships and four exhibitions tenable at the Royal College for a maximum period of six years are also awarded every year on the results of a competitive examination. The first of these examinations was held in December, 1927, and there were 217 candidates, as against 113 who entered for the Junior Boys' Scholarship and Exhibition examination.

The number of scholarships awarded every year to primary school girls has now been increased from four to six, and the tenure of these scholarships has been extended from three to five years, thus allowing the winners to pursue their studies in a secondary school as far as the Cambridge School Certificate examination. 170 candidates sat for the Girls' Scholarship examination held in December, 1927, as against 174 in the previous year.

One of the most important problems is the recruitment of suitable teachers, and their proper training. The recent abolition of the examination result grant system and the revision of the salaries of primary school teachers have, as was expected, already attracted a few candidates of the right type; while the complete reorganisation of the Training School will, it is hoped, also help in the solution of this difficult question.

Technical instruction is provided in three principal centres, viz :—

(1) The Government Technical School in Port Louis, at which about 50 full-time boys, of an average age of 16 years, and about 200 boys from the primary schools in Port Louis, of an average age of 13 years, are taught mechanical drawing and receive manual instruction in woodwork;

(2) The Government Industrial School at Beau Bassin, at which about 150 boys from the primary schools in lower Plaines Wilhems are given manual instruction in woodwork; and

(3) The Government Trades School, at Bell Village, with about 75 full-time apprentices of an average age of 18 years, half of whom are carpenters and the rest masons, blacksmiths, or tinsmiths.

Woodwork classes on a more moderate scale are also held in three aided primary schools in the district of Plaines Wilhems, and the possibility of further developments in this direction has been engaging the attention of the Superintendent of Schools for some time.

Steps have been taken for the extension of garden work in the primary schools of the Colony, and the inclusion of Nature study in the syllabus of examination for Teachers' Certificates.

*Elementary Agricultural Education.*—A scheme for the establishment of a Farm School was given effect during the year. Provision was made for the extension of school gardens as well as for the further systematisation of instruction in Nature study for teachers in training, and for the training of elementary school teachers in agricultural science.

### Secondary Education.

The number of secondary schools in the Colony was 10, as against nine in 1926. The total number on roll was 719 boys and 678 girls, while the average attendance was 635 and 518, respectively, as compared with 689 boys and 627 girls on roll for the previous year, with an average attendance of 577 and 539 respectively.

Three girls were, for the first time, presented by Loreto School, Curepipe, for the London Matriculation Examination held in January, 1927: one passed in the First and another in the Second Division.

The results of the Cambridge Local Examinations held in December, 1927, have not yet been received, but there is every reason to believe that the usual number of passes will be obtained.

The higher education of boys is conducted at the Royal College.

The staff consists of the Rector, the Senior Master, 11 Masters, with British University Degrees, and 11 Assistant Masters. The latter are encouraged to take the B.A. or B.Sc. examination of the London University.

The College has well-equipped chemical and physical laboratories.

Admission to the College is conditional upon passing an entrance examination or upon winning a primary schools' scholarship.

The year opened with 327 pupils on the roll, and on 31st December, 1927, the number was 349; while the average attendance for the year was 323.

Boys receive instruction in classical and scientific subjects, Latin being compulsory and Greek optional and alternative with more advanced Natural Science in the Entrance, Lower Middle, and Upper Middle Classes. Bifurcation takes place in the Cambridge Local School Certificate Class.

Two scholarships, one on the classical and one on the modern side, are awarded annually in the highest form, which is examined by the Syndicate of Examiners of the Cambridge University. These scholarships are of the value of £1,000 with a temporary increase of 30 per cent. and with first-class passage allowances to and from England, and are tenable for four or five years at any British University or any scientific or technical institution of the United Kingdom.

### **Agricultural Education.**

*Mauritius Agricultural College.*—The curriculum and regulations for the award of scholarships and laureateships were revised during the year, and the appointment of an additional lecturer in Sugar Technology and Engineering was approved.

Nine new students were admitted in the first term of 1927 and there were six second-year and five third-year students on the books, while eight students were attached to the College for post-graduate work. There were thus 28 students last year in training at the College. Four third-year students obtained the diploma of the College.

Examinations of the City and Guilds of London Institute in Sugar Technology were held in April and for the registration of Agricultural Chemists in July.

The Laureateship of the College was awarded to Mr. R. Olivier for the study of Agricultural Chemistry.

## **X.—LANDS AND SURVEYS.**

### **(Including Geological Survey.)**

No geological survey of the island has ever been made.

The topographical survey of the island was made by the Army Survey Section in 1905 and a map of the island is published on a scale of one inch to the mile.

No important grants of land are now made by Government, the lands retained as Crown lands, of a total acreage of about 80,000 acres, being managed mostly as forest lands.

Of these, 13,621 acres are now given on lease to private parties.

## **XI.—LABOUR.**

Labour, both agricultural and unskilled, is almost exclusively composed of Indians and their descendants, who constitute the majority of the population.

Natives of Africa and Madagascar were introduced as slaves during the French occupation, chiefly for agricultural purposes. Natives of India were also introduced as slaves from Bengal before 1758. On the 11th March, 1839, was published the Royal Order in Council of 7th September, 1838, by which slavery was abolished, and these labourers were liberated.

In 1769, Indians from the Malabar coast, coming mostly from Pondicherry, came to the island and offered themselves for hire as free labourers for a certain number of years, mostly as artificers and peons.

In 1815, forced labour in the shape of convicts was obtained from India, but this supply ceased in 1837. On the other hand.

labourers from India were introduced, with the help of Government, by private individuals from 1835 until 1839, when the emigration of agricultural labourers was prohibited in India.

In 1842 the prohibition imposed upon exportation of Indians was removed by Indian Act No. XIV of 1839. Emigration was renewed and in 1844 immigration was carried on under the exclusive agency of the Government of Mauritius.

The several ordinances passed from that time to 1878 were consolidated in Ordinance No. 12 of 1878, which governed the conditions of indentured emigration from India. Such emigration was again prohibited in 1910.

The Government of India was approached by a committee in 1922 for the re-opening of emigration and on 1st June, 1923, a licence was obtained permitting the emigration of 1,500 labourers for a period of one year. Only 732 labourers with their dependants, numbering 1,395 immigrants in all, arrived during that year.

Their conditions of employment were governed by Ordinance No. 12 of 1922, which repealed all the previous labour ordinances and which, with some amendments, is still in force.

On application for an extension of the licence, a delegate of the Indian Government was sent here to investigate the effects of further immigration on the general conditions of labour at that time, and, consequent on his report, the application was not entertained. The number of Indian immigrants in the Colony on 31st December, 1927, was 15,895.

Labourers on estates, when under verbal or written contract binding for not more than one calendar month, receive in addition to their wages free housing, rations, and medical care; but the majority of them prefer to be employed by the day, in which case they reside in the adjoining villages.

The present economical condition of the island has entailed a marked reduction in the amount of wages paid for labour generally when compared with the wages paid during the years of prosperity 1919-22.

The number of artisans employed on estates and elsewhere has also been reduced, with the result that, although there are still openings for unskilled labour, the opportunities for skilled labour have decreased.

On the other hand, through the liberal education afforded to the labour class, artisans are springing up and are swelling the ranks of workers who have now to emigrate in search of work.

## XII.—MISCELLANEOUS.

Apart from the Ordinances which have been specially mentioned under the relevant sections, the following may be quoted:—

“*The Carriage of Goods by Sea Ordinance, 1927 (No. 28).*” which reproduces the provisions of the Carriage of Goods by Sea

Act of 1924, thus applying to Mauritius and its Dependencies the unified rules agreed upon at the International Conference on Maritime Law held at Brussels in October, 1922, as amended in 1923 at Brussels and given effect to in the English Act.

"*The Pensions (Amendment) Ordinance, 1927 (No. 40),*" which amends the Pensions laws and provides mainly for the computation of pensions in months instead of in years. This Ordinance also allows, amongst other things, the inclusion for pension of non-pensionable service followed without break by service in a pensionable office and charges the Colony with its proportionate share of pension in respect of officers of the Colonial Audit Department transferred to or from the service of this Colony.

"*The Judicial Separation (Amendment) Ordinance 1927, (No. 41),*" which amends articles 108 and 311 of the Civil Code, so as to bring our law into line with that of France in the matter of the administrative and proprietary rights of a woman after she has obtained her judicial separation. She is given a domicile of her own and her rights to dispose of her property are unfettered.

The writer of this report arrived in the Colony on the 3rd November, 1927, and has to acknowledge the great assistance rendered by the various heads of departments in its compilation.

W. H. INGRAMS,

*Assistant Colonial Secretary.*



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## ANNUAL GENERAL REPORT FOR THE YEAR 1927.

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### Geographical.

Gibraltar is a narrow peninsula 3 miles in length and  $\frac{3}{4}$ -mile in breadth, with a total area of  $1\frac{1}{2}$  square miles, situated in latitude  $36^{\circ} 7' 16''$  North and longitude  $5^{\circ} 21' 13''$  West, near the southern extremity of Spain, being joined to the mainland by a low sandy isthmus. It consists of a long high mountain, the ridge of which, from north to south, divides it into two unequal parts. The extreme height of the "Rock," as the mountain is commonly called, is 1,396 feet. The town is built on the western and southern sides, which face the Bay. The northern and eastern faces of the Rock are an inaccessible cliff, forming a series of rugged precipices at the foot of which, on the eastern side, confronting the Mediterranean, stands the small fishing village of Catalan Bay.

### Historical.

Gibraltar was known to the ancients as Mons Calpe, one of the Pillars of Hercules, the other being Mount Abyla, or Apes Hill, on the opposite coast of Africa. It was possessed successively by the Phœnicians, the Carthaginians, the Romans, and the Visigoths, but remained uninhabited till the Mohammedan invasion of Spain.

In 711 the Moorish Chief Tarik-Ibn-Zeyad landed on the Rock, and gave it the name of Gibel-Tarik, or Mountain of Tarik, of which the name of Gibraltar is a corruption. It remained in Moorish hands until 1309, when it was seized by the Spaniards.

In 1333 it was again taken by the Moors, but was wrested from the Moslem dynasty in 1462, and reverted to the dominion of Spain.

In 1704 it was captured by the British forces under Admiral Sir George Rooke, during the War of the Spanish Succession, and was ceded to Great Britain by the Treaty of Utrecht in 1713, renewed by the Treaty of Versailles in 1783. Many attempts have been made to retake Gibraltar, especially during the great siege in 1779-83, when General Elliot (afterwards Lord Heathfield) defended it against the united forces of Spain and France, but all have been unsuccessful and it has remained in British hands since its capture in 1704.

The Government is administered under Letters Patent of the 12th September, 1922, by a Governor aided by an Executive Council composed of four official and three unofficial members. The power of legislation is vested in the Governor, who is also the General Commanding the Garrison.

### Climate.

The general climate of Gibraltar is mild and temperate, though somewhat hot and oppressive during the months of July and August. The meteorological record for 1927 shows 71.0° F. as the mean maximum temperature, the highest shade temperature being 94.0° F. on the 15th August, and the lowest 42° F. on the 19th January. The rainy season is spread over the period from September to May; the annual average rainfall is 35 inches, but in 1927 36.08 inches were registered, of which 14.42 inches fell in December.

## I.—GENERAL OBSERVATIONS.

The coaling trade of the port showed no improvement during the year and the total number of tons of coal taken as bunkers in 1927 was again less than in 1926. This is principally due to the competition of Oran and Algiers, and the general stagnation of trade in the Mediterranean. Another factor, perhaps, which affects the situation is the cessation of grain shipments from Black Sea ports.

The tourist traffic, however, again showed some improvement, and eight more tourist liners visited the port in 1927 than during the previous year. Its unique situation at the meeting place of two continents and the junction of the Mediterranean and the Atlantic Ocean makes this Colony an ideal centre for tourist traffic and, as a result of the cheap summer fares instituted by the Peninsular and Oriental Steam Navigation Company, a large number of persons disembark here *en route* for Morocco and the south of Spain. A Tourist Bureau has now been established by the



Government with a view to increasing the attractiveness of Gibraltar as a port of call and developing it as a tourist resort. Other measures are in contemplation with the same object in view.

On the 23rd June, Their Royal Highnesses the Duke and Duchess of York landed at Gibraltar on their homeward journey after their successful tour in Australia and New Zealand. On landing they were received by His Excellency the Governor and the Hon. Lady Monro, D.B.E., and, after inspecting the Guard of Honour, proceeded to Commercial Square, where loyal addresses of welcome were presented by the City Council, the Committee of the Exchange and Commercial Library, the Chamber of Commerce, and the Workers' Union. The Royal Party then drove to the Reservoirs, which they inspected. The cars afterwards made a tour of the Rock and returned to Government House, where the Royal Visitors were entertained to lunch by His Excellency the Governor. In the afternoon Their Royal Highnesses were present at a garden party at Government House, and afterwards inspected the British Legion, the Boy Scouts and Girl Guides at the Alameda. In the evening Their Royal Highnesses gave a dinner party on board H.M.S. "Renown," which sailed for England the same evening, giving a firework display as she left the Harbour. During the evening illuminated boats cruised around H.M.S. "Renown" and music was provided by massed bands embarked on a tug.

### **Vital Statistics and Public Health.**

The estimated total civil population of Gibraltar at the close of 1927 was 17,333, of whom 16,120 are fixed residents. These figures represent the population between sunset and sunrise, but some 4,500 aliens and 1,500 British subjects resident in the neighbouring Spanish town of La Linea come into Gibraltar daily.

The number of births during the year was 363, of which 185 were boys and 178 girls. The birth-rate per 1,000 was 22.5. The births refer to the fixed population only, as under the Aliens Order in Council no alien may give birth in the Colony.

279 deaths were registered, and the crude death-rate was 17.27 per 1,000. Infantile mortality was 99.1 per 1,000 and deaths from pulmonary tuberculosis 1.3 per 1,000. The number of deaths from cancer was 16.

During the year under review the health of Gibraltar has continued to be good. The vital statistics are considered satisfactory and with regard to infectious disease there is nothing of outstanding importance to record, except an outbreak of diphtheria of which 61 cases were reported, one only being fatal. The sanitary work of the Colony is carried out by the City Council, who also have charge of the roads, lighting, water supply, and hygienic measures in dwellings.

**II. GOVERNMENT FINANCE.**

The revenue and expenditure for the last five years have been :—

				<i>Revenue.</i>	<i>Expenditure.</i>
				£	£
1923	...	...	...	150,283	167,087
1924	...	...	...	166,115	160,362
1925	...	...	...	162,250	167,267
1926	...	...	...	158,636	147,942
1927	...	...	...	160,031	160,114

Sums of £7,650 and £4,663 in respect of the appreciation of invested funds are included in the revenue for the years 1924 and 1923. The 1925 expenditure includes a sum of £11,183 in respect of depreciation of invested funds.

There is no public debt.

A statement of assets and liabilities on 31st December, 1927, is given below :—

**ASSETS AND LIABILITIES ON 31ST DECEMBER, 1927.**

<i>Assets.</i>						£	s.	d.
Balance in Bank and Chest and in the hands of Crown Agents for the Colonies and Sub-Accountants ... ..						23,225	3	5
Advances due to Government ... ..						556	18	2
Imprests ... ..						355	0	0
Unallocated Stores Suspense Account ... ..						2,211	6	6
Investments (at cost) :—								
						£	s.	d.
Surplus Funds ... ..						273,278	1	3
Savings Bank ... ..						118,610	3	4
Note Security Fund ... ..						160,000	0	0
						551,888	4	7
Investments on account of Deposits :—								
Supreme Court Funds ... ..						84,434	11	1
Unrepresented Estates Account ... ..						270	3	8
						84,704	14	9
						£662,941	7	5

*Liabilities.*

Deposits due by Government :—							
		£	s.	d.		£	s. a.
Supreme Court Funds ...		85,089	17	10			
Savings Bank ...		120,707	14	5			
Currency Notes ...		160,000	0	0			
Sundry Deposits ...		4,051	14	7			
		<hr/>				369,849	6 10
Drafts and Remittances ...						5,989	12 3
Investments Depreciation Fund ...						29,432	3 5
Reserve Fund ...						100,000	0 0
		<hr/>				505,271	2 6
Balance of Assets in excess of Liabilities ...						157,670	4 11
		<hr/>				£662,941	7 5
		<hr/>					

**Currency and Banking.**

The legal tender of the Colony is in sterling denominations, and the accounts in Government Departments are so kept, but Spanish currency circulates freely. The fact that a very large proportion of the supply of food-stuffs, etc., is obtained from Spain necessitates payment being made in the currency of that country. Many merchants and traders keep their accounts in pesetas and centimos and dollars and cents.

The rate for conversion of British into Spanish currency is governed by the Stock Exchange at Madrid and telegraphed daily to the banks at Gibraltar. The average for the year was 28 pesetas 35 centimos to the pound sterling.

During the year, a new Currency Note Ordinance was enacted which came into operation on the 1st October. The process of replacing the old issue by new notes commenced in November and at the end of the year the total value of the notes in circulation was £160,000, made up of new notes to the value of £87,000 and old notes to the value of £73,000. The new notes are of the following values :—£5, £1, and 10s.

A Government Savings Bank, which was established in 1882, is worked under the administration of the Post Office. The total number of depositors on 31st December, 1927, was 3,123, with deposits amounting to £120,707 14s. 5d. Interest is paid at the rate of a halfpenny per mensem on each complete sum of twenty shillings.

There are four private banks, who have correspondents in all the principal cities of the world and offer every facility for the transaction of banking business, viz. :—

Barclays Bank (Dominion, Colonial and Overseas), Head Office, 54, Lombard Street, London, E.C.3.

The Credit Foncier d'Algerie et de Tunisie, Head Office, 43, Rue Cambon, Paris; London Branch, 18 St. Swithin's Lane, E.C.4.

A. I. Galliano, of Gibraltar.

Messrs. Rugeroni Bros. & Co., of Gibraltar.

### III.—TRADE AND INDUSTRY.

The staple trade is the supply of coal, fuel oil, stores, and fresh water to shipping, as Gibraltar is pre-eminently a coaling station. A fair amount of business is also carried on in connection with transit cargo to Morocco and Spain.

Statistics of imports and exports (except such as are necessary for revenue purposes) are not kept, the only dutiable goods being wines, spirits, malt liquors, perfumed spirits, motor spirit, and tobacco.

The only industries in Gibraltar are connected with shipping and the manufacture of tobacco. At the foundries and yards situated on the North Front, boats, lighters, and steam launches are built and repaired and extensive repairs are often carried out to both hulls and machinery of vessels calling here.

There is no land in Gibraltar capable of cultivation.

### IV.—LEGISLATION.

Eight laws were enacted during the year, four of which have interest other than local :—

*Ordinance No. 1.—The Currency Note Ordinance, 1927*, which provides for a new issue of currency notes.

*Ordinance No. 2.—The Pensions Ordinance, 1927*, which was enacted on the lines of the Model Ordinance prepared by the Committee on Pensions and Passage Expenses of Colonial Officers, 1922-1924.

*Ordinance No. 5.—The Legitimacy Ordinance, 1927*, which was enacted on the lines of the Imperial Act, to meet a demand for appropriate legislation on this subject.

*Ordinance No. 7.—The Limited Partnerships Ordinance, 1927*, which was enacted on the lines of the Imperial Act of 1907 to meet the needs of the local trading community.

## V.—EDUCATION.

Under Ordinance No. 7 of 1917, education is compulsory in the case of children between the ages of 5 and 14 years.

Since the year 1921, the Governor has been advised on educational matters by a Board of Education under the chairmanship of the Colonial Secretary.

The Government grant-in-aid per pupil in average attendance in efficient day schools during the school year is £3 10s., and the total amount paid for the year ended 31st March, 1928, was £7,972.

Books and equipment are issued to pupils free of charge, and for this purpose a special grant is made to the several School Committees, ranging, according to standard, from 2s. to 16s. for each child appearing on the roll on the last day of the scholastic year. The total amount paid for the year ended 31st March, 1928, was £992.

In addition, Government paid £525 to the City Council on behalf of the schools for general sanitary purposes, rates and water, and £324 for rent of certain school premises.

The total cost to Government in respect of education was, therefore, £9,813, exclusive of the grant of £240 towards handicraft classes and a special contribution of £950 towards the cost of a new building for the manual training of the boys of the elementary schools.

The payment of "school pence" is voluntary, and the receipts from this source are practically negligible.

There are nine school buildings, containing thirteen Government-aided schools for primary education—eleven Roman Catholic and two Hebrew.

The Roman Catholic schools are conducted by the Christian Brothers and Nuns of the Order of Loreto, and the Hebrew schools by lay teachers, the various schools being under the direct management of local committees.

The total number of scholars on the registers was 2,654, and 2,280 was the average number in attendance during the year.

The work of the School Attendance Officer, appointed early in 1923, has continued to give good results; 75 attendance orders were issued during the year, and 42 cases were brought before the Police Court, for infringements of the Compulsory Education Ordinance.

Since 1925 this Government has made an annual grant of £240 to the Christian Brothers in respect of wood-work classes which are open to boys of all religious denominations. These classes have proved very successful but, owing to lack of space, only the boys in the two upper standards could receive instruction. A new building has now been erected, fitted with the machinery and tools requisite for wood and metal work, and all boys taking courses in manual work will be taught to make proper drawings of their work in wood or metal. They will also receive special training in drawing

suitable for those taking up a trade or profession. The new building was opened on the 7th November by His Excellency the Governor and, in addition to the usual annual grant of £240, the Government made a special grant of £250 towards the cost of construction. His Excellency also promised that for every pound subscribed and paid by the people of Gibraltar before the Estimates for 1928 were ready for submission to the Secretary of State for the Colonies, the Government would subscribe 10s., up to a maximum of £700. The total amount subscribed by the general public amounted to £1,450.

Thirteen candidates presented themselves for the annual examination in English for Assistant Teachers. Six of these had qualified the previous year and were taking the examination again with a view to obtaining honours. Five of these were successful, and of the other seven candidates, who were taking the examination for the first time, all qualified, one obtaining honours. These results were very satisfactory.

The annual inspection of the schools in March, 1928, was again carried out by the Resident Inspector as it was decided, for reasons of economy, not to apply for the services of a Board of Education Inspector. The inspection was carried out on the lines of previous inspections by the Visiting Inspector, and the work was found to be on the whole quite satisfactory, all the schools, with one exception, receiving the full grant.

Monthly inspections of the children in the schools were carried out by the school nurse, one of the staff nurses attached to the Colonial Hospital, and occasional visits paid by the assistant surgeons.

*Secondary.*—There are five secondary schools in the Colony, viz. :—

Line Wall College, for boys, conducted by the Christian Brothers.

Two Convents, for girls, under the Nuns of the Loreto Order.

Brympton, a Church of England school for girls, managed by a local Committee and conducted by the teachers.

Bringhurst, for boys, under the directorship of Mr. E. Martin.

In these educational establishments pupils are prepared for the Cambridge Local Examinations, which are held annually. In addition to the above, there are a number of private schools with about 176 pupils, but the instruction given is mainly of an elementary character.

## VI.—COMMUNICATIONS.

### Postal.

British and Continental mails are forwarded and received daily by overland route—via Spain and France—and there is a daily steamer service in connection with this mail service, between

Gibraltar and the Spanish town of Algeciras, for which the Colonial Government pays the Algeciras-Gibraltar Ferry Boats Company, under contract, an annual subsidy of £500.

Correspondence for Egypt and places eastward of Suez is forwarded weekly by Peninsular and Oriental Steam Navigation Company steamers, and the Orient Line steamers also carry mails for Port Said, Colombo, and Australia.

Ship mails for Malta, Algiers, and Oran are made up and despatched by merchant steamers on every practicable opportunity, and mails for Morocco are carried by Bland's Line of steamers twice a week, and daily via Algeciras.

There is also a parcel post service with the United Kingdom, and parcels may be sent to nearly all the countries in the Postal Union.

Overland mails from Gibraltar reach London and vice versa in about three and a-half days.

### **Telegraphs.**

The Government land lines connecting Gibraltar with the Spanish towns of San Roque, Cadiz, Malaga, and Cordoba are worked by the Eastern Telegraph Company who, under a special agreement, pay £300 annually to the Colonial Government.

The Eastern Telegraph Company have a station at Gibraltar where telegrams are accepted for all parts of the world.

Commercial and private messages for transmission by the Naval Wireless Station to merchant vessels at sea in the neighbourhood are also accepted at the offices of the Eastern Telegraph Company and, similarly, wireless messages received from ships are delivered by that Company.

### **Telephones.**

There are no telephones under Colonial Government control. A telephone service of the Strowzer Automatic Telephone Exchange type was installed in 1926 for the City Council of Gibraltar by the Peel Conner Telephone Works of Coventry, of which the General Electric Company are the proprietors. This service was inaugurated in October, 1926, and telephonic communication was recently established with the United Kingdom, France, Switzerland, and Portugal.

The establishment of this telephone service was authorised in November, 1924, by "The City Council (Telephone) Ordinance, 1924" (No. 7 of 1924), the City Council being guaranteed by the Government against loss on working expenses to a limit of £5,000 for a period of five years.

The local Naval and Military Departments have their own lines which are connected with the City Council exchange.

### Roads.

The upkeep of roads is in the hands of the City Council in whom they are vested by law. The length of roads open for traffic is five and a-quarter miles in the City, or North District, four miles in the South District, and about four and a-half miles in the North Front and Catalan Bay District.

Roads in the City are narrow; those in the other districts are fairly wide. All are in excellent condition and are suitable for motor traffic.

There are no railways or tramways in Gibraltar.

### Shipping.

Owing to its geographical position, Gibraltar is extensively used as a port of call and a coaling station by vessels of every nationality.

The following table shows the number and tonnage of ships which entered Gibraltar during 1927 :—

<i>Steamers.</i>		<i>Sailing Vessels.</i>		<i>Total.</i>	
<i>Number.</i>	<i>Tonnage.</i>	<i>Number.</i>	<i>Tonnage.</i>	<i>Number.</i>	<i>Tonnage.</i>
3,744	6,602,101	685	22,103	4,429	6,624,204

As compared with 1926, there was a net increase of 102 in the total number of vessels entering the port, with an aggregate tonnage of 502,916 tons—an increase of 103 sailing vessels and a decrease of one steamer.

The principal lines which call regularly at this Port are :—

Weekly :—

The Peninsular and Oriental Steam Navigation Company.

Fortnightly :—

Orient Line, Anchor Line, Moss Line, Ellerman Line, Wescott and Laurance, Power Steamship Company, MacAndrew's Hall Lines, Nippon Yusen Kaisha Line, Lloyd Sabaudo, Oldenburg-Portugiesische, The American Levant Line, and Royal Netherlands Steamship Co.

Monthly :—

Cunard Line, France-Amerique Co., and Societa Anonima di Navigazione Neptunia.

Occasionally :—

White Star Line, Union-Castle Line, British India Steam Navigation Co., New Zealand Steamship Co., and Elder Dempster Line.

In addition to the above, Bland's local line of steamers makes frequent sailings to and from Moroccan, Algerian, and Spanish ports, and arrangements have been made by Messrs. Bland to combine the sailings of their steamers with the arrival and departure



of those belonging to the Peninsular and Oriental Steam Navigation Company and Orient Line respectively, thus establishing a direct service between the United Kingdom and Morocco via Gibraltar. There is also a daily steamer service between Gibraltar and the town of Algeciras on the opposite side of the Bay.

The length of passage from London to Gibraltar is about four and a-half days.

G. S. FOLLOWS,  
*Acting Colonial Secretary.*

GIBRALTAR,  
25th June, 1928.

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# BERMUDA.

## ANNUAL GENERAL REPORT FOR 1927.

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### Geographical and Historical.

The Bermudas or Somers Islands are a cluster of a large number of small islands situated in the west Atlantic Ocean, in  $32^{\circ} 15' N.$  latitude and  $64^{\circ} 51' W.$  longitude, comprising an area of about 19 square miles, and containing a population estimated in 1927 at 30,814. The estimated density of the population is 1,622 per square mile. The nearest point of the mainland is Cape Hatteras in North Carolina, 580 miles distant. The Colony is divided into nine parishes. The capital is the city of Hamilton (population about 3,000). The only other commercial harbour of importance for sea-going ships is St. George's in the extreme east of the group. There is a naval dockyard, as Bermuda is the headquarters of the West Indies and Atlantic Squadron.

According to the Spanish navigator and historian, Ferdinand d'Oveido, who visited these islands in 1615, they were discovered at an earlier date by Juan de Bermudez, after whom they were called the Bermudas. The exact date of the discovery is not

known, but a map contained in the first edition of the *Legatio Babylonica* of Peter Martyr, published in 1511, shows the island "La Barmuda" in approximately correct position.

No aborigines were found on the islands by the early voyagers, and the Spaniards took no steps to found a settlement.

The islands were still entirely uninhabited when, in 1609, Admiral Sir George Somers' ship "The Sea Venture," while on a voyage with a fleet of eight other vessels conveying a party of colonists to the new plantations then being formed in Virginia, was wrecked upon one of the numerous sunken reefs which surround the islands on every side. The reef is still called, after the name of the Admiral's ship, the Sea Venture Flat.

Sir George Somers died in Bermuda the following year and his companions, ignorant possibly of the prior claims of Juan de Bermudez, called the group "The Somers' Islands." The reports of the beauty and fertility of the land, taken home by Somers' nephew, Captain Mathew Somers, induced the Virginia Company to seek an extension of their charter, so as to include the islands within their dominions, and this extension was readily granted by King James I, but shortly afterwards the Virginia Company sold the islands for the sum of £2,000 to a new body of adventurers called "the Governor and Company of the City of London for the Plantation of the Somers Islands."

During the first 25 years of its existence the settlement prospered exceedingly under the government of the Company, but as the original shareholders, who included many of the most distinguished men of the time, died or disposed of their holdings, the administration was neglected, and the settlers became subject to many grievances and abuses. Finally, in 1679 they appealed to the Crown for redress, and in 1684, a verdict having been given under a writ of Quo Warranto against the Charter of the Bermuda Company, the government of the Colony passed to the Crown, and the Company, the members of which then held only 25 shares of land in the island, was dissolved.

### **Government and Constitution.**

The Orders and Constitution of the Colony under the Bermuda Company made provision for a reasonable amount of self-government by the settlers, including the right to elect representatives to make laws within certain restrictions. The first General Assembly for Bermuda was held at St. George's on the 1st August, 1620.

When the government passed to the Crown in 1684, the Commission to the first Royal Governor confirmed the grant of representative institutions, which have been continued without interruption until the present day.



The laws of the Colony are enacted by a Legislature, consisting of the Governor, the Legislative Council, and the House of Assembly.

The Governor is assisted by an Executive Council consisting at present of four official and three unofficial members. The Legislative Council consists of nine members, three of whom are official and six unofficial. The House of Assembly consists of 36 members, four of whom are elected by each of the nine parishes. The members of the Executive Council and of the Legislature are paid 8s. a day for each day's attendance. There are about 1,350 electors, the electoral qualifications being the possession of freehold property of not less than £60 value. The qualification for a member of the House of Assembly is the possession of freehold property rated at £240.

A number of the departments of Government are controlled by Executive Boards with the head of the department acting in an advisory capacity only.

### I.—GENERAL.

The policy of the Executive Government during the period under review was directed largely towards persuading the Legislature to establish a sound system of finance. The attention of this body was drawn to the fact that the time had arrived when it was necessary either to curtail expenditure, raise loans, or increase taxation. The first two solutions were preferred. Expenditure on public works was curtailed and a loan of £20,000 was raised locally in order to balance the budget. Taxation is very light in Bermuda and the revenue is mainly derived from Customs duties—in 1927 this was £196,698 out of a total revenue of £259,943. There is no income tax, no land or property tax, and no estate duties payable on transfer or probate.

General Sir John Asser, K.C.B., K.C.M.G., K.C.V.O., completed his term as Governor of the Colony in July. He had devoted his services mainly towards the improvement of sanitation, the reclamation of marshes, the beautifying of the Colony by flower growing, the development of the local sale of agricultural products, and the promotion of a railway to solve the question of inland transportation. He was succeeded by Lieutenant-General Sir Louis Bols, K.C.B., K.C.M.G., D.S.O., who arrived in Bermuda on the 2nd of September.

This year was further signalized by the first law passed providing for a contribution towards the Imperial garrison maintained in the islands; the actual amount was based on the numbers in the garrison with provision for a further payment of 2s. 6d. per head of the population, payable in 1930, when final payments will have been completed in respect of a contribution made towards the cost of the Great War.

**II.—FINANCE.**

The Colony is in a strong financial position in so far as dependance on the tourist traffic can be laid. The public debt amounts to £70,000 only and provision has been made for a sinking fund to take care of this. Some £130,000 is raised by an *ad valorem* import duty of 10 per cent., plus one-tenth of this on goods produced in foreign countries, and £70,000 on specific duties.

The revenue and expenditure for the five years ending on the 31st of December, 1927, have been as follows :—

		<i>Revenue.</i>	<i>Recurrent Expenditure.</i>	<i>Expenditure from Reserves.</i>
		£	£	£
1923	...	249,302	237,925	—
1924	...	251,591	260,969	—
1925	...	243,425	300,283	—
1926	...	256,402	260,784	31,663
1927	...	259,943	268,495	35,847

The revenue derived in certain years from the export duty on spirits is not included in the tabular statement of revenue and expenditure above as it is liable to be misleading. In 1923, 1924, and 1925 the amounts so derived were £77,548, £60,613, and £5,051, respectively, or a total of £143,212. A wise use was made of this windfall. A channel loan of £40,000 was paid off, £69,000 was devoted to the reclamation of marshes, a fine hospital was built up, and channel improvement works were carried out from current revenue. The surplus moneys accumulated did not however suffice for the expansion of expenditure; in 1926 and again in 1927 resort was made to loans in order to balance the budget, as the House of Assembly was unwilling to impose fresh taxation. It was also found necessary in 1927 to curtail the expenditure on public works which were more or less urgently required. The expenditure from Reserves on Marsh Reclamation in 1927 was £35,847, the total expenditure to the end of the year being £65,486. About five acres had then been reclaimed, but the expenditure includes £23,184 for the purchase of land.

There is a Government Note issue of £38,000 out of a total of £40,000 authorized by law. The value of the investments held as security for this liability was £47,886 on the 1st of January, 1927. There is no coin reserve. By a law passed in April (Act 15 of 1927) the Governor-in-Council was empowered to authorize the issue of notes to the value of the investments for redemption. This stood at £50,378 at the end of 1927. During the year, notes of a new design to the nominal value of £150,000 were ordered

in London to replace the existing stock, which was manufactured in the United States in wartime, and to provide for exchanging old and defaced notes.

The estimated excess of assets over liabilities on the 31st of December, 1927, was £137,297. The surplus moneys available for general purposes on this date were £35,495. This included however £13,344, the balance of the proceeds of a loan of £20,000 paid into General Revenue under the authority of the Bermuda Local Loan Act, 1927. The remaining liquid reserves must, as far as it is possible to foresee, be absorbed in Marsh Reclamation works, as it has been the considered policy of the Legislature to devote the reserves accumulated in 1924 and 1925 to this service.

The amount standing to the credit of depositors in the Savings Bank on the 31st of December was £84,568, as against £78,741 and £74,604 in 1926 and 1925 respectively.

The public debt repayable at par in 1950 stood at £70,000 at the end of the year. £45,000 was borrowed in 1920, £5,000 in 1925, and the balance in 1927. Under the Bermuda Local Loan Act, 1892, which governs these loans, payments into a sinking fund begin three years from the date of the first issue of stock. The rate of interest is 5 per cent. and the last loan was raised at a premium of £1 8s. per £100. The amount to the credit of the sinking fund on the 31st of December was £23,025.

There are two private banks in the Colony—the Bank of Bermuda, Ltd., and the Bank of N. T. Butterfield and Son, Ltd. The authorised capital in each case is £15,000. The assets of these banks as shown in their last published statements amounted to £488,864 19s. 11d. and £427,803 3s. 4d. respectively.

### III.—PRODUCTION.

The only industry of the Colony, apart from boat-building on a small scale and fishing for local consumption, is agriculture. The products are vegetables for the North American market and home consumption, and lily bulbs for export.

The following table gives the quantities of potatoes, onions, and other vegetables exported each year from 1924 to 1927, together with an estimate of the net annual value of the crop exported and consumed locally :—

		<i>Quantity.</i>	<i>Net Bermuda Exports. Value.</i>	<i>Consumed locally. Farm Value.</i>	<i>Total Value of Crop.</i>
		Bushels.	£	£	£
1924	...	416,604	192,000	174,000	366,000
1925	...	313,280	104,500	166,000	270,500
1926	...	426,896	190,526	185,000	375,526
1927	...	371,887	133,128	191,000	324,128

The chief crops and their destination in 1927 were as follows :—

<i>Vegetable.</i>	<i>Quantity.</i>	<i>Country of Destination.</i>
Potatoes ... ..	34,870 barrels	U.S.A.
	28 "	Canada.
	1,374 "	British West Indies.
Celery ... ..	54,651 crates	U.S.A.
Parsley ... ..	55,819 "	U.S.A.
Carrots ... ..	44,833 "	U.S.A.
Kale ... ..	7,733 "	U.S.A.
	10,486 "	U.S.A.
Onions ... ..	8,042 "	Canada.
	1,042 "	British West Indies.
	16,056 "	Canada.
Tomatoes ... ..	132 "	British West Indies.

The total value of the exports to the United States was £198,682, including lily bulbs, of which 5,814 cases were shipped to the value of £13,374. Exports to Canada were valued at £8,421 and to the West Indies at £2,219. The only export to Great Britain was 107 cases of lily bulbs, valued at £2 10s. a case.

The expenditure on the Agricultural Department during the year was £6,894, or £400 less than in 1926. Two members only of the staff, the Director and the Plant Pathologist, had received scientific training out of Bermuda.

The planting is entirely in the hands of small farmers. There are some 17 holdings only of more than 10 acres, the largest being 46½ acres.

There are 314 farmers on the registers of the Department. Of these, 133 are Portuguese, 94 other white races, and 87 coloured.

The total area cultivated was approximately 1,231 acres, of which 422 were farmed by owners or part owners and 809 by tenants.

The number of acres under potatoes in 1927 was 653, green vegetables 298, bananas 84, lilies 76, onions 74, and celery 65.

It has not hitherto been found possible to obtain any reliable statistics regarding the financial standing of the farming community. The majority of the farmers are very reluctant to give information on this point.

It was estimated in 1927 that the farmer received 63 per cent. of the sale value of his crop exported, the balance being taken up in freight and charges.

The average New York prices in 1927 were :—

	s.	d.
Carrots per bushel ... ..	6	3
Celery per bushel ... ..	11	1
Lettuce per bushel ... ..	4	1
Onions per bushel ... ..	10	6
Parsley per bushel ... ..	6	6
Potatoes per barrel ... ..	44	7

#### IV.—TRADE AND ECONOMICS.

The only trade of any importance in Bermuda is that of catering for tourists, the great bulk of whom come from America. The majority of visitors arrive in the winter months, from the end of December until the end of April. During this period in 1927 four passenger steamers a week came to Bermuda from New York; two belonging to Messrs. Furness Withy and Co., Ltd., and two to the Royal Mail Steam Packet Company. The former firm were in receipt of a subsidy at the rate of £20,000 a year. The construction during the course of the year of the 20,000-ton motor vessel "Bermuda," built for Messrs. Furness Withy especially for this trade at a cost of about £1,000,000, was completed. The first-class passenger accommodation on board this luxurious steamer is about 700. The summer season has been increasing steadily in popularity during the last few years; it lasts from July to October. Hotel and steamship rates are lower in summer than in winter.

The management of the tourist trade is in the hands of the Trade Development Board, the members of which are appointed by the Governor. It is composed entirely of unofficials and mainly of persons financially interested in the success of the traffic.

The public funds voted by the Legislature and expended for the services controlled by this Board, and the number of tourists annually, are shown in the following table:—

					<i>Expenditure.</i>	<i>Tourists.</i>
					£	
1923	...	...	...	...	42,628	26,761
1924	...	...	...	...	45,984	25,653
1925	...	...	...	...	39,531	26,190
1926	...	...	...	...	34,904	27,214
1927	...	...	...	...	36,694	30,816

The expenditure on advertising annually is approximately £8,500 in America, £2,000 in Canada, and £1,500 in Great Britain. Some £4,000 is spent locally for the entertainment of visitors. The steamer subsidy of £20,000 is included under this head. It has been estimated that the average stay of tourists is 10 days, during which each tourist will spend from £2 a day upwards.

The only direct tax affecting tourists is that of 10s. on every passenger ticket for persons leaving Bermuda. This tax applies to all residents as well as to visitors.

The shops in the Colony stock the highest class of articles for sale to the tourists. Buyers from the chief houses go to Europe every summer to purchase dry and fancy goods for the winter season. The comparatively low tariff of 10 per cent. to 11 per cent. *ad valorem* enables articles to be sold at lower prices than in the States or Canada. It has been estimated that 80 per cent. of the revenue of the Colony is derived from the tourist trade.

The estimated value at the port of shipment of the imports and exports for the past five years has been as follows :—

					<i>Imports.</i>	<i>Exports.</i>
					£	£
1923	...	...	...	...	1,882,401	493,800
1924	...	...	...	...	1,815,023	446,252
1925	...	...	...	...	1,325,041	166,020
1926	...	...	...	...	1,404,824	239,553
1927	...	...	...	...	1,532,794	249,958

### Imports.

				1927.	1926.
				£	£
<i>From.</i>					
United Kingdom	...	...		436,801	367,521
British Colonies	...	...		296,497	272,245
Foreign Countries	...	...		799,496	765,058
				<u>£1,532,794</u>	<u>£1,404,824</u>

The articles in which there is competition with the United States, which supplies practically all imports from foreign countries, are not many in number. Electrical goods, cigarettes, and the faultily-described fancy goods are the most important. There is undoubtedly a good opening for leather ware from the United Kingdom. The bulk of the boots and shoes are imported from the United States of America, and an investigation on this subject is needed.

It should be recognised in discussing this question that the rapid turnover for a retail trader in dealing with America is a strong factor.

### Exports.

				1927.	1926.
				£	£
<i>To.</i>					
United Kingdom	...	...		8,035	9,275
British Colonies	...	...		14,383	32,118
Foreign Countries	...	...		227,540	198,160
				<u>£249,958</u>	<u>£239,553</u>

### CHIEF ARTICLES OF EXPORT.

				1927.	1926.
				£	£
Empty Oil Barrels	...	...		17,530	16,876
Lily Bulbs	...	...		16,772	14,294
Potatoes	...	...		97,360	80,665
Other Vegetables	...	...		104,136	89,046
Whiskey	...	...		500	15,160

**General.**

Although there has been a gratifying increase in 1927 in the trade with the United Kingdom and Canada, it is too early to say whether this is likely to be continued. It is possible that it may be due to some extent to the fact that 1927 was the first full year in which the Imperial Preference Act of 1925 was in force, relieving all Empire goods of a surtax of one-tenth of the *ad valorem* duty payable on goods imported from other sources. It is not possible to suggest any specific articles, except hardware and boots and shoes, in which British trade might be increased.

**OPENINGS FOR TRADE AND EMPLOYMENT IN BERMUDA.**

There is a considerable amount of competition at present in Bermuda among local merchants in the supply of dry and fancy goods, hardware, provisions, and clothing. Those who are established discourage newcomers. A number of reliable commission agents, whose addresses can be supplied on application to the Department of Overseas Trade in London or the Colonial Secretary in Bermuda, are doing business in the Colony. They are agents for the principal British firms in all commodities.

No one is advised to go to Bermuda without a definite opening in prospect, as opportunities are limited.

**V.—COMMUNICATIONS.****Shipping.**

The total shipping for the year under review, entered and cleared, was 3,041,350 tons, a decrease of 147,563 tons compared with 1926.

The following Table shows the details of the above total, distinguishing between British and foreign ships and between steam and sailing ships:—

				BRITISH.			
				Steam. Tons.		Sail. Tons.	Total. Tons.
Entered	...	...	...	1,232,290	+	1,780	= 1,234,071
Cleared	...	...	...	1,231,188	+	1,636	= 1,232,824
Total British Shipping				...	...	...	<u>2,466,895</u>

				FOREIGN.			
				Steam. Tons.		Sail. Tons.	Total. Tons.
Entered	...	...	...	272,217	+	11,552	= 283,769
Cleared	...	...	...	277,839	+	12,847	= 290,686
Total Foreign Shipping				...	...	...	<u>574,455</u>

**TOTAL TONNAGE.**

1927	...	...	British	...	2,466,895	Total	...	3,041,350
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In addition to the regular service with New York with from one to four steamers running weekly according to the season, the service with the West Indies and Canada for passengers and freight was maintained at about fortnightly intervals throughout the year by the Royal Mail Steam Packet Company and the Canadian Government Merchant Marine. The former withdrew from the service at the end of May.

Direct passenger service was maintained between England and Bermuda by the Pacific Steam Navigation Company and Messrs. Elders and Fyffes, Limited. The Royal Mail Company and the London Direct Line were mainly responsible for the freight service from the United Kingdom.

### **Postal.**

284 mails were received from overseas and 216 despatched. The volume of business generally is probably greater relatively than that of any other Colony owing to the constant stream of tourists. 83,662 parcels were received. The money-order business amounted to £65,202. Of this, orders to the value of £57,783 were issued in addition to 10,557 postal orders of the value of £5,102.

The transit to London for mails is usually 11 days.

The postage on letters to all parts of the Empire remains at 1d. per ounce or part of an ounce.

### **Cables and Wireless.**

The Halifax and Bermudas Cable Company maintain a line to Halifax, and the Direct West India Company a line to Jamaica via Turks Islands. The full-rate charges are: New York 1s. 6d., and England 2s. 4d., a word. There is a weekend letter service to Great Britain at a minimum charge of 11s. 8d. (for twenty words).

In 1925 a licence was granted to the Halifax and Bermudas Cable Company granting them a monopoly of commercial wireless traffic, the right being reserved to the Government to take over the Station at the end of ten or fifteen years. The Station was completed by the end of 1927 but was not open for traffic. The call sign is G Z H. The system of transmission is Marconi C.W. Valve 25 K.W. The wave-length is to be between 2,750 and 3,000 metres and the range 2,500 miles. There is also a 1.5 K.W. quenched gap set, tuned to 600, 650, 750, and 800 metres for working with ship stations.

### **Telephones.**

There are about 1,450 miles of telephone line owned by the Bermuda Telephone Company. The rates for a one-party service are from £8 10s. (residential) to £11 10s. per annum. There is no limit to the number of calls and there are no toll or mileage charges.



## VI.—JUSTICE, POLICE AND PRISONS.

This section does not call for any particular comment. 282 persons were committed to prison during the year, as against 190 in 1926. Of these, 240 were men; 122 (98 in 1926) were first offenders, seven (10 in 1926) were sentenced to imprisonment for five years or more, and 144 (85 in 1926) for three months or less.

770 persons were prosecuted, of whom 13 were discharged, 716 punished on summary conviction, and 41 dealt with by the Supreme Court. Of the latter, 30 were for offences against property, and 11 for offences against the person. There were no cases of manslaughter.

1927 was marked by the passage of five Acts dealing with the consolidation of the laws relating to Police, Prisons, Juries, Establishment, and Superannuation.

## VII.—PUBLIC WORKS.

The heaviest item of expenditure under this head for a number of years has been on the cost of widening and deepening the approaches to the Colony by sea. £298,200 has been spent on this object since 1910. During the five years ending on the 31st of December, 1927, the amount of £117,109 was expended. The Narrows Ship Channel was widened to 450 feet and deepened to 31 feet throughout.

During the three years 1925 to 1927, 22 per cent. of the total expenditure of the Public Works Department has been on dredging; 20.3 per cent. on the reclamation of marshes, and 57.7 per cent. on general works.

The work on the King Edward VII Memorial Hospital and its extensions was practically completed during the year at a total cost since 1914 of £54,046.

£13,535 had been expended on the new Aquarium completed in 1927, and £6,246 on a new school for coloured children. The estimate for the total cost of the latter is £18,000, and it will provide for 1,000 scholars.

The expenditure on the maintenance of the roads was £18,972 and on construction £957. The mileage of the roads is about 105, of which 36 are macadamized.

## VIII.—PUBLIC HEALTH.

Bermuda rejoices in a very healthy climate, although the humidity in the air renders it somewhat relaxing in the summer months. As stated by the Director of the Health Department in his report for 1927, it is sufficiently north to be free from tropical diseases and sufficiently remote from the great centres of population in the temperate zone to be spared the severe respiratory diseases so prevalent there.

Although other mosquitoes are fairly plentiful, the *anopheles* has never existed in the islands, so they have always been free from malaria. Epidemics of any kind have been few and far between.

A hospital for infectious diseases was opened on the 1st of January, 1927. The admissions were few—11 cases of diphtheria, four of mumps, two of chicken pox, and one of scarlet fever.

A venereal diseases clinic, established at the general hospital in 1926, gave 522 treatments to 51 cases in 1927, as against 268 to 34 cases in the former year.

The number of infectious diseases notified from 1924 to 1927, with the principal contributors, were as follows:—

	1924.	1925.	1926.	1927
Chicken Pox ... ..	50	20	103	35
Diphtheria ... ..	29	17	42	19
Typhoid ... ..	33	28	10	14
Tuberculosis ... ..	—	3	19	12
Measles ... ..	33	3	18	2
Scarlet Fever ... ..	65	2	1	1
Other diseases ... ..	1	9	17	32
<b>Total</b> ... ..	<b>211</b>	<b>82</b>	<b>210</b>	<b>115</b>

Tuberculosis became notifiable in the course of 1925 for the first time.

The number of deaths from infectious diseases in 1927 was recorded as follows: 6 from typhoid, 11 from tuberculosis, 7 from pneumonia. Of this list, one case only was that of a visitor to the islands.

The total death-rate was 12.2 and the birth-rate 26.2 per 1,000.

The infantile mortality rate for the past five years has been: 1923 93, 1924 103, 1925 91, 1926 119, 1927 81, per 1,000 living births.

The administration of public health control is unsatisfactory. In each parish there is a local board of health which is primarily responsible for sanitation. There is also a general board of health with strictly limited powers. The latter consists of six members appointed by the Governor, one representative of each parish, nine in number, and one from each municipality. This forms an unwieldy body of 17 members. In eight of the parishes there is no special sanitary tax; in six there is no collection of refuse and garbage, etc. In the chief residential parish, the assessed value of the property in which is over £400,000, the total expenditure on sanitation in 1927 was £36. The position has been made more difficult by the refusal of the Legislature to make provision for a trained sanitary inspection service. It is eloquent testimony to the healthiness of the Colony that there has been such comparatively little sickness in the past and that the death-rate is so low.

There is reason to hope that the Legislature will take the position into consideration at an early date and will by centralizing health administration render the Colony in a short time as free from the risk of disease as human precaution can effect.

During the course of the year, a small leper station was established for the segregation of all lepers in the Colony. These were as far as was known only 10 in number. Separate houses were built for them.

The most important move for the betterment of health conditions made during the year was the initiation of the work of the Bermuda Welfare Society, a society composed of a number of ladies associated together for the establishment of a district nursing service, more particularly for the benefit of the poorer people.

### IX.—EDUCATION.

Education is compulsory between the ages of 7 and 13, but is not free except in a few particular cases. There are in practice and by consent separate schools for white and coloured children, but there is no difference in the standard of education as between the races.

The total number of children of school age in the Colony was 2,876 in 1927. The average number on the school lists was 3,545 and the average attendance 2,943 or 83 per cent.

The statistical records regarding the children of school age in 1927 are as follows :—

	White.	Coloured.	Total.
Aided Schools ... ..	620	1,773	2,393
Unaided ... ..	195	220	415
Taught at home ... ..	23	36	59
Physically or mentally unfit ...	2	7	9
Total ... ..	840	2,036	2,876

32 schools are in receipt of grants from the Board of Education. Of these, 11 are attended by white and 21 by coloured children.

The total expenditure on Education in 1927 was £21,379, of which the principal items were :

Administration £985, Scholarships £754, Buildings £6,379, and General Grant £11,358.

The system of education cannot be considered to be good. The schools are mainly poorly equipped and without play-grounds, and no provision is made for teaching the elements of any trade or industry.

The Director of Education in his report for 1927 states that the average child on leaving school finds himself with a very fair ground-  
ing in arithmetic but with no practical knowledge of how to apply

his training, and weak in English though able to write a fairly legible hand. Geography is taught in the traditional style and an outline of early English history comprises his knowledge of History. He may have learnt some elementary hygiene and will probably be fairly well versed in some parts of the Bible.

There are very few certified teachers except the headmasters, and there is no local institute for the training of teachers. Children have to buy their own school-books and materials if their parents can afford them, or do without. The Director of Education has made certain recommendations for the future which will, if supported by the Board, be brought gradually into effect. The Board is prepared for a progressive policy.

Six of the aided schools teach secondary school subjects in the higher forms. Four of these send in candidates every year for the Cambridge Local Examinations. In 1927, out of 64 candidates who sat for these examinations six passed the preliminary, 15 the junior, and eight obtained School Certificates.

### **X.—LANDS AND SURVEY.**

An Ordnance survey of the islands was made in 1898-99. This is naturally much out of date and proposals for a new survey are under consideration. The property of the Colonial Government is limited to the public buildings and premises and a few sea beaches. Both the War Department and the Admiralty have held possession of considerable properties, but they are gradually divesting themselves of those which no longer have any value for defence purposes. The remaining land in the Colony is divided up into small areas under private ownership. There are no large estates. As noted in a previous part of this report, the agricultural industry utilizes some 1,236 acres only, divided into 314 farms.

A considerable number of Americans have acquired winter homes in Bermuda, but the acquisition of land by aliens is strictly controlled by law. No alien may acquire land without the permission of the Governor-in-Council and the total area which may be alienated to foreigners is limited to 2,000 acres in the whole and 400 acres in any one parish. Some 640 acres only had been so alienated up to the end of 1927.

The transfer of land is entirely by deed involving a recital of previous ownerships. It is hoped that this cumbrous and archaic system will be remedied at an early date.

### **XI.—LABOUR.**

There was as usual no appreciable unemployment during the year. The demand is normally slightly in excess of the supply. Probably about one-sixth of the labour comes from the West Indies and the same proportion from the Azores. The latter are mainly engaged in agriculture. Wages are from 9s. to 11s. per diem for unskilled men and 14s. to 16s. for artisans. Domestic servants are paid from 25s. to 40s. per week.

**XII.—MISCELLANEOUS.****Cost of Living.**

The cost of living in Bermuda is very high, but this is not due to taxation. Meat, ice, inland transport, and electric current are all more expensive than in other places in similar conditions. Meat costs from 1s. 3d. to 3s. a lb., and ice 1d. per lb. The only form of land transport other than bicycle is either by carrier 'bus or by carriage, with a nominal minimum fare of 3s. for half a mile or less and 8s. for over one mile and under two. Electricity costs 1s. per kilowatt for light and 6d. for power, with certain discounts. Other expenses are proportionately high. The upkeep of a horse and trap is about £200 a year. The cost of living for a single man is about £3 to £6 a week according to standard.

No motor-cars for private use are allowed in the islands.

**Meteorological.**

The range of temperature during 1927 was between 45.9 in March and 86.0 in August. The mean temperature for the year was 70.4 and the mean relative humidity 83. The total rainfall was 50.12 inches, or 7.47 below the average for the past nine years. The mean atmospheric pressure was 29.981.

**Legislation.**

The only legislation of general importance passed in 1927 was The Immigration Act (No. 23). This consolidated previous laws and made some amendments. "Immigrants" generally means in the Act all passengers travelling other than first-class and returning residents. Second-class and steerage passengers are not allowed to land without individual permission and are required to produce certificates of health and character. They are also required to deposit £20 as security against their becoming a charge on public or parochial funds. It is competent, however, for the Governor to give exemption from these requirements. Any immigrant or passenger who is undesirable within the meaning of the law is liable under the new Act to deportation at any time within five years after arrival.

**General.**

The community generally during 1927 was prosperous and contented. There were no local disturbances of any kind.

H. HENNIKER-HEATON,

*Colonial Secretary.*

1st July, 1928.

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No. 1403.

## BRITISH GUIANA.

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### REPORT FOR 1927.

*(For Reports for 1925 and 1926 see Nos. 1300 and 1351  
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58-1403

# BRITISH GUIANA.

## ANNUAL GENERAL REPORT FOR THE YEAR 1927.

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### Geography and History.

The Colony of British Guiana, which, it is interesting to note, is the only British possession on the South American Continent, lies between the first and ninth degrees of North latitude and the fifty-seventh and sixty-first degrees of West longitude, and has a seaboard of roughly 270 miles, extending from near the mouth of the Orinoco River on the west to the Corentyne River on the east. The Colony is bounded on the north by the Atlantic Ocean, on the south and south-west by Brazil, on the east by the Dutch colony of Surinam, and on the west by Venezuela, and is divided into the three counties of Essequibo, Demerara, and Barbice. It has an area of approximately 90,000 square miles, of which only 198 square miles along the coast and up the rivers are cultivated.

The climate is a naturally healthy one for the tropics. In the coastal region there are two wet and two dry seasons in the year. The long wet season usually commences about the middle of April and lasts until the middle of August. This is followed by the long dry season, which extends to the middle of November.

From the middle of November to the end of January there is a short wet season, while a short dry season follows from the beginning of February to the middle of April. In the forest region of the interior the usual contrast between the wet and dry seasons is less marked than on the coast. In the savannah region in the far interior the rainfall is less than that registered in either of the other two. The mean temperature in the shade ranges in the coastal regions from 79° F. to 82° F., the mean maximum registering from 83° F. to 87° F., and the mean minimum from 74.5° F. to 76.5° F. Fresh sea-breezes blow steadily, almost without intermission in the daytime, during the greater part of the year. During the months of January, February, and March they continue both day and night, and make life pleasant for the European. The general direction of the wind is north-east, east-north-east, or east. Occasionally, however, during the wet months of the year, a land-breeze is experienced from the south-east, south, or south-west, and with this wind the heaviest falls of rain occur. The wind varies from "gentle" to "fresh" and gales are exceedingly rare. During 1927 the mean shade temperature as recorded at the Botanic Gardens, Georgetown, was 80.7° F. or 0.6° F. lower than that of the previous year, and 1.7° F. above that at the Penal Settlement, Mazaruni River. The absolute maximum was 90.5° F. and the absolute minimum 70° F. The total rainfall for the year was 118.63 inches, the highest recorded since 1893. The mean rainfall in 1927 for the coastlands was 120.56 inches, as compared with 108.50 inches at the Penal Settlement, Mazaruni, and 109.89 inches at stations situated more than 15 miles from the coast.

The principal languages spoken in the Colony are English and different Indian languages.

The Colony was first partially settled between 1616 and 1621 by the Dutch West India Company, who erected a fort and depot at Fort Kyk-over-al in the present county of Essequibo. In 1624 a settlement was founded on the Berbice River by Van Peere, a Flushing merchant, under licence from the company. The first English attempt at settlement was made by Captain Leigh on the O'apock River (now French Guiana) in 1604. The effort, though followed up by Robert Harcourt in 1613 and 1627, failed to establish a permanent settlement. Lord Willoughby, famous in the early history of Barbados, also turned his attention to Guiana and founded a settlement in Surinam in 1663, which was captured by the Dutch in 1667 and ceded to them at the Peace of Breda in exchange for New York. The Dutch retained their hold on the three colonies with more or less firmness, now yielding to England, now to France or Portugal, till 1796, when during the war of the French Revolution they were captured by a British fleet sailing from Barbados. The territory was restored to the Dutch in 1802, but in the following year was retaken by Great Britain, and finally ceded to that Power in 1814.

The Constitution, as it existed up to 1891, may be summed up very briefly. It consisted of a Governor, a Court of Policy, and a Combined Court. The functions of an Executive and Legislative Council and House of Assembly were performed by the Governor and Court of Policy, except as regards taxation and finance, which were dealt with by the Combined Court, composed of the Governor and Members of the Court of Policy, together with six Financial Representatives. The Court of Policy made all laws and ordinances, except the annual Tax and Customs Duties Ordinances, which were passed by the Combined Court. Towards the end of the 18th century, when British Guiana still belonged to the Dutch, there were two sets of taxes and two separate treasuries or chests—these taxes were: the Capitation Tax, which, together with the import, produce, and tonnage dues, went into the Dutch West India Company's (now the King's) chest; and the Ongeld, an additional head tax, which belonged to the Colony chest. The abolition of slavery in 1834 rendered it necessary to alter the system of taxation to suit the new social conditions obtaining, and the King's taxes and the Colonial taxes were abolished and the ways and means necessary for carrying on the Government were raised by increasing the import duties. The two chests were merged into one—the revenue of the King's chest was surrendered to the Combined Court as a part of the ways and means in return for, and during the term of, a Civil List. In 1842, by an Order of Her Majesty in Council, it was declared that during the continuation of the Civil List the King's chest should continue to be abolished. The Civil List has continued to be renewed from time to time as necessary. During 1891 an Act was passed, which came into force in 1892, effecting a considerable change in the Constitution. By this Act the administrative functions of the Court of Policy were transferred to an Executive Council, and the duties of the former became purely legislative. The Court of Policy, under the new Constitution, consists of the Governor, seven official members, and eight elected members. It may be prorogued or dissolved at the end of five years, and a general election must be held within two months of the date of dissolution. The number of Financial Representatives, who with the Court of Policy form the Combined Court, remains unchanged (six).

### Currency.

Accounts are kept in dollars and cents. British sterling and United States gold coin are current and are legal tender.

On the 16th August, 1915, the Combined Court approved of the issue of Government currency notes of the face value of \$1=4s. 2d. and \$2=8s. 4d. The first notes were issued in January, 1917, and on the 31st December, 1927, there were notes in circulation to the face value of £104,166 13s. 4d.

Barclays Bank (Dominion, Colonial and Overseas) and the Royal Bank of Canada have establishments at Georgetown, with branches at New Amsterdam, Berbice. Both of these banks carry on savings bank business at their head offices in Georgetown.

The first Government Savings Banks were established at Georgetown and at New Amsterdam in the year 1836, and the first Post Office Savings Banks in December, 1889. In November, 1910, the Combined Court passed a resolution approving of the amalgamation of these banks, and authorising the transfer of the Government Savings Bank to the Post Office as from the 1st July, 1911. Savings Bank business is conducted at 52 post offices throughout the Colony. On the 31st December, 1927, there were 34,836 depositors with a total of £381,162 12s. 1d. at credit in the Banks. The investments on the same date were £387,520 7s., from which an interest income of £17,525 2s. 2d. was received. The Bank has a reserve fund of £11,832 11s. 1d. and a Depreciation of Investments Fund of £16,764 9s. 4d.

### **Weights and Measures.**

Imperial Weights and Measures are in use in the Colony.

#### **I.—GENERAL.**

1. On the 29th September, the Governor, Sir Cecil Rodwell, K.C.M.G., proceeded to England on leave of absence, and the administration of the Government of the Colony was assumed by the Hon. C. Douglas-Jones, C.M.G., Colonial Secretary.

2. The Canada-West Indies Trade Agreement was formally brought into force during the year. In connection with the Agreement, the Canadian Government has given to Messrs. Cammell, Laird & Co., of Birkenhead, England, a contract for the construction of the steamers for the Canada-West Indies Service, and it is expected that the vessels will have been completed and put into operation by the early part of 1929. The steamers placed on the Eastern route will have refrigerator facilities. In the meanwhile the Canadian Government Merchant Marine has been carrying on a temporary service with two passenger vessels and several cargo boats.

3. The Report\* of the Parliamentary Commission appointed to inquire into the economic conditions of the Colony was received during the year. As a consequence of the Report, a local Commission was set up to advise as to the precise nature of the modifications of the Constitution which were necessary and to suggest in what directions improvements could be effected. This Commission duly reported and the Report† was forwarded to the Secretary of State before the year closed.

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\* Cmd. 2841.

† Cmd. 2985.

## II.—FINANCIAL.

**Revenue.**

4. The revenue of the Colony for the year 1927 amounted to £1,068,865, falling short of the estimate by £145,883 and exceeding the revenue for the preceding financial year by £14,738.

**Expenditure.**

5. The total expenditure for the year amounted to £1,148,028, being £60,959 less than the estimate and £25,463 less than the expenditure for the previous year.

6. The revenue and expenditure for the last five years were as under :—

<i>Year.</i>					<i>Revenue.</i>	<i>Expenditure.</i>
					£	£
1923	...	...	...	...	1,114,704	1,081,549
1924	...	...	...	...	1,056,238	1,065,457
1925	...	...	...	...	1,095,574	1,126,394
1926	...	...	...	...	1,054,127	1,173,491
1927	...	...	...	...	1,068,865	1,148,028

**Assets and Liabilities.**

7. The Balance Sheet of the Colony at the 31st December, 1926, showed a deficit of £103,548. The Estimate of Expenditure for 1927, together with the Supplementary Estimates, amounted to £1,208,987, while the Revenue Estimate for the year was £1,214,748. The actual expenditure incurred during the year exceeded the actual revenue collected by £79,163, the financial transactions of the Colony for 1927 showing therefore a deficiency of £79,163. The total assets and liabilities at the end of the year 1927 were £1,728,194 and £1,910,904 respectively, resulting in an accumulated deficit at 31st December, 1927, of £182,710.

**Public Debt.**

8. The Public Debt at 31st December, 1926, amounted to £2,701,126. At the close of the year under review it had been reduced temporarily (see below) by £25,856, resulting in a total loan indebtedness at 31st December, 1927, of £2,675,270. Against this liability there was an accumulated Sinking Fund of £465,707. A sum of £1,169,497 advanced by the Crown Agents, pending the raising of a loan to finance the Georgetown Improvements, Coastal Drainage, Irrigation and Pure Drinking Water Schemes now in progress, is not included in the above liability.



**Particulars of Loans subscribed during 1927.**

9. In September, 1926, the Government gave notice of its intention to exercise the right to redeem the 6 per cent. Debentures of Issues 1 to 4 under Ordinance 6 of 1916, and bondholders were subsequently given the option of converting their holdings under these issues into 5 per cent. Bonds. During the year under review applications for £25,667—5 per cent. Debentures at par were invited to meet the cost of redemption of such Debentures of the above-mentioned issues as were not converted. The loan was fully subscribed and is issuable as from 1st January, 1928.

**III.—PRODUCTION.****Agriculture.**

10. The sugar crop of the Colony for 1927 was 114,030 tons, as compared with 99,171 tons the average for the preceding nine years. The area reaped was 56,534 acres, the average yield of sugar being 2.00 tons per acre. The returns submitted by sugar plantations in the Colony show that in 1927 59,271 acres were under sugar-cane.

11. The area devoted to the cultivation of rice was 50,427 acres, of which 13,087 acres yielded both spring and autumn crops. The total yield of padi was 58,855 tons, equivalent to about 35,300 tons of cleaned rice. 11,496 tons of rice were exported in the year 1927 as compared with 2,914 tons in 1926. Large areas of the front lands of the Colony pre-eminently suited for the cultivation of rice are not so occupied.

12. Coconuts are planted on 27,790 acres of land. The exports of nuts were 334,000. In addition, 23,266 cwt. of copra and 25,326 gallons of coconut oil were exported. A great number of the nuts gathered, returned by the growers at 22,113,000 nuts, were used locally for the manufacture of coconut oil, or directly as food. There is a very wide area of lighter soils on the front coastlands suitable for planting with coconuts.

13. The acreage returned as being under coffee was 5,272 acres. The export of coffee amounted to 3,844 cwt., as compared with 6,904 cwt. in 1926. The area is capable of considerable expansion, notably in the North-West and Pomeroon Districts.

14. The area returned as being planted with cocoa was 1,356 acres.

15. The area devoted to the cultivation of limes during the year was 669 acres. In the year under review 5,249 gallons of concentrated lime juice and 273 gallons of essential oil of limes were exported.

16. The export of rubber was 347 cwt. as compared with 307 cwt. in 1926.



17. The acreage under provision crops was 13,855 acres.

18. The number of cattle in the Colony, including 70,000 on the hinterland savannahs, was 141,446 in 1927; horses were returned at 4,055, sheep at 24,060, goats at 19,784, swine at 18,070, donkeys at 8,603, mules at 1,710. There are also 265 buffaloes mostly used on the timber grants.

19. The annual exports and values of the principal agricultural commodities during the last five years were :—

—		1923.	1924.	1925.	1926.	1927.
Sugar ...	Tons ...	83,167	85,896	97,728	84,659	109,616
	£ ...	2,132,802	1,767,125	1,413,696	1,260,470	1,830,747
Molasses	Gals. ...	65,997	1,160,757	1,345,243	2,017,862	2,677,457
	£ ...	3,761	20,196	20,922	21,551	30,322
Rum ...	Pf. gals.	420,996	769,304	1,148,124	789,643	1,081,020
	£ ...	40,321	75,803	117,127	83,098	107,592
Rice ...	Tons ...	3,971	4,470	6,918	2,914	11,497
	£ ...	57,018	65,122	109,159	45,447	150,806
Copra ...	Lb. ...	940,925	1,848,895	1,935,110	3,820,468	2,605,818
	£ ...	7,633	14,895	20,023	39,595	24,276
Balata...	Lb. ...	1,026,368	1,370,212	904,784	597,401	753,037
	£ ...	130,939	171,284	113,132	74,675	81,773

### Forestry.

20. Field work during 1927 comprised detailed examination of the forests of the North-West District, extending along a small portion of the Waini River and its branch, the Barama River, up to Kokerit Landing, and along the Barima River from three miles below Koriabo up to about 10 miles above Eclipse Falls. The first valuation survey disclosed that there are many areas of more or less open swamp land with palms, etc., and a large area of swamp forest. An aerial reconnaissance during August confirmed this, and it is estimated that there are about 3,200 square miles of these swamps and swamp forest of low grade in the area between the Pomeroon River and the Venezuelan frontier. These valuation surveys have shown that the forests of the North-West District are of much lower value than those of the Bartica-Kaburi area and that the extent of mora forest, especially along the Barima River, is much less than was anticipated. A valuation survey was also made over 14½ square miles of Wallaba forest in the Demerara River district.

21. Samples of eleven commercial hardwood timbers were sent to the Imperial Institute to be tested for the manufacture of paper pulp. The reports show that while the yield of unbleached pulp ranged from 37 to 48 per cent., most of these eleven woods furnish

good yields of well-digested pulp with a comparatively low consumption of soda; all of the woods gave rather short-fibred pulps; and the best paper was obtained from Wallaba, Mora, Trysil, and Morabukea.

22. Three samples of bamboos were similarly tested and the Imperial Institute report states that of the first two the yields of pulp (40 and 46 per cent.) were fairly good, and that the papers prepared from them were practically identical in character and of excellent strength and quality. The results of the third sample were not so satisfactory, the pulp yielded (41 per cent.) was inferior and more difficult to bleach and the paper appreciably weaker.

23. The report on the sample of Kokerit palm fruit sent in 1926 confirmed a previous report on the excellent yield and high quality of oil extracted from the kernels.

24. Experiments were commenced in the seasoning of crabwood or British Guiana mahogany and the lumber under cover in the stacks appears to be drying with little waste.

25. On the voluntary application of shippers, the inspection of timber for export was continued. The branded timber equalled 47 per cent. of the total export of hardwoods and was as follows:—Greenheart, 2,720 logs or 127,970 cubic feet; Balata, 50 logs or 1,261 cubic feet; Mora sleepers, 351 in number or 934 cubic feet; total 130,165 cubic feet, of which 25 logs or 1,720 cubic feet were branded by the Lands and Mines Department.

26. The number of licences for woodcutting purposes in existence at the end of the year was 392 over an area of 113,946 acres.

### **Mining.**

27. The mineral production of British Guiana is at present confined to gold, diamonds, and bauxite. The records of gold production date back to 1884 and the aggregate amount produced from then to the end of 1927 was 2,668,260 ounces, valued at £9,732,910. The highest production in any one year was 138,528 ounces in 1893; but since the rise of the diamond industry and consequent almost entire diversion of the interest of the diggers to the alluvial diamond workings, the output of gold has dwindled until only 6,722 ounces were produced in 1927; of this, 3,975 ounces were won by dredging. With the exception of 69,430 ounces won by quartz-mining ventures, all of which are closed down, the entire production of gold has been obtained from alluvial deposits.

28. Diamonds were first discovered in 1890 but, though of good quality, failed to obtain a good market price until 1916, from which year production rose steadily to a peak production of 214,474 carats valued at £1,033,014 in 1923. World prices have gradually declined since then and the production for 1927 was 173,796 carats valued at £724,152. The aggregate production from 1890 to

the end of that year was 1,400,744 carats valued at £5,938,187. The entire production has been obtained from alluvial workings, mostly by individual workers, no pipes or fissure deposits having been found.

29. Valuable and extensive deposits of exceptionally high grade bauxite exist in easily accessible locations. Operations to develop part of these were commenced in 1914 by the Demerara Bauxite Company, an offshoot of the Aluminium Company of America. Plant and equipment to a value of about £1,000,000 have been erected and the aggregate output to the end of 1927 was 816,244 tons, the output during the year being 160,933 tons. This places British Guiana in the forefront of bauxite-producing countries. The British and Colonial Bauxite Company—an offshoot of the British Aluminium Company and allied British and Colonial interests—has recently taken up another large area, but active mining operations had not been commenced at the close of the year.

30. The annual exports of these minerals for the last five years were :—

—		1923.	1924.	1925.	1926.	1927.
Gold	{ Oz. ...	5,621	5,491	6,974	5,434	5,607
	{ £ ...	21,952	20,584	27,494	20,471	20,713
Diamonds	{ Carats	214,385	184,572	188,207	145,097	180,678
	{ £ ...	1,032,585	853,632	845,268	687,698	753,112
Bauxite	{ Tons	100,346	154,324	174,999	183,859	160,933
	{ £ ...	110,488	162,863	184,655	191,809	168,031

### Fisheries.

31. There is room for considerable development in many directions, especially in deep-sea fishing.

A fair supply of sea-fish is generally kept in cold storage at an ice-manufacturing establishment in Georgetown. In early times, smoked or barbecued paku was obtained from the North-West District of the Colony in large quantities, but this is now rarely seen. Salt cod, herrings, and mackerel are imported in quantity, but no Colony fish are now cured. Fresh-water fish are obtainable in the markets, but the supply does not meet the demand.

32. The angler may enjoy good sport with tarpon (or cuffum) as well as with several other fish which are more grateful to the palate. The river-fishing in the interior is exceptionally good.

33. Fish-glue from the gilbaker was exported to the amount of 12,707 lb., value £590.

34. Crustaceans, such as crabs and prawns, add much to the food supply in the country districts. Now that imported fish

is much higher in price the demand for fresh fish has increased without a corresponding increase in the supply; hence prices are generally higher.

#### IV.—TRADE AND ECONOMICS.

35. The total value of the trade of British Guiana (including bullion and specie) during the year was as follows :—

	£
Imports ... ..	2,470,819
Exports ... ..	3,338,827
	<hr/>
Total	£5,809,646

an increase of £476,614 on the trade of the previous year.

The value of goods in transit to other countries transhipped direct in Colony ports was £186,447, as compared with £129,818 in 1926.

The value of imports (less re-exports and excluding bullion and specie) was £2,394,321, a decrease of not quite 1 per cent. on the imports of the previous year.

Domestic exports showed an increase of 21.8 per cent. on 1926 transactions, produce to the value of £3,263,420 having been shipped. The greatest increases were shown in sugar, rice, and diamonds.

Sugar to the extent of 109,616 tons, valued at £1,830,747, was exported, being an increase in quantity of 24,957 tons and in value of £570,277 on 1926 exports.

The quantity of rice shipped was 11,496 tons, valued at £153,931. This was the largest quantity exported since 1917.

Diamonds weighing 180,678 carats and valued at £753,112 were exported, as compared with 145,098 carats, valued at £687,698, in 1926.

36. The United Kingdom accounted for slightly over 40 per cent. of the total trade, or about the same percentage as in the previous year. The imports at 51 per cent. showed a small percentage increase on those of 1926, while the exports at 33 per cent. dropped to the extent of 5 per cent.

Canada with nearly 30 per cent. of the total trade and the United States of America with 11 per cent. did about the same volume of trade with the Colony as in 1926.

The principal imports from the United Kingdom were : cotton piece goods (£240,650), edible oils (£53,761), beer and ale (£49,573), manufactured tobacco (£49,250), common soap (£39,476), apparel (£33,579), wool manufactures (£29,564), and hats and bonnets (£18,993).

The main supplies received from Canada were : flour (£243,928), lumber (£25,956), condensed milk (£22,512), oats (£20,864), canned fish (£9,259), cheese (£7,613), and pickled fish (£7,607). All of

the floor and pickled fish imported into the Colony came from Canada.

Pickled meat (£41,141) and tobacco in leaf (£9,656) were the principal commodities imported from the United States of America.

37. The total value of domestic exports to the United Kingdom amounted to £1,071,559, of which sugar was responsible for £620,174, rum £85,268, and balata £70,989. Other exports to the Mother Country were : raw gold (£20,713), timber (£20,412), copra (£14,719), and rubber (£2,259).

Canada was the Colony's best market for her produce, the value of the export trade with her being £1,209,505 as against £1,071,559 to the United Kingdom, which came next. The principal exports to the Dominion were sugar (£1,207,802) and coconuts (£902). Of the sugar exported, 65 per cent. went to Canada as compared with 70 per cent. in 1926.

All of the bauxite exported (viz., 160,933 tons, valued at £168,031) went to the United States of America, which country also took 1,827,115 gallons of molasses, valued at 19,032, or 68 per cent. of the total quantity exported.

## V.—COMMUNICATIONS.

### Shipping.

38. Regular steamship communication is maintained with the United Kingdom, Canada, the United States of America, the West Indies, and the Dutch and French Guianas. The principal Lines calling here are the Harrison Direct Line, the Trinidad Line, the Royal Netherlands Steamship Company, the Compagnie Generale Transatlantique, the Canadian Government Merchant Marine, the Ocean Dominion Steamship Corporation, the Aluminium Line, and the Dutch Government steamers from Surinam.

### Railways.

39. There are three lines of single-track railway in the Colony, of which two were acquired by the Government from the late Demerara Railway Company and one is owned and operated by Messrs. Sprotons, Limited, a local company. One of the Government lines runs from Georgetown along the east coast of Demerara for a distance of 60½ miles to Rosignol on the left bank of the Berbice River and diagonally opposite New Amsterdam. The other runs along the west coast of Demerara for a distance of 18½ miles, starting at Vreed-en-Hoop on the left bank of the Demerara River and ending at Parika, a point on the coast immediately opposite the island of Leguan in the estuary of the Essequibo River.

40. Messrs. Sproston's line of railway runs from Wismar on the left bank of the Demerara River to Rockstone on the right bank of the Essequibo River, a distance of about  $18\frac{3}{4}$  miles, and forms an important link in the means available for reaching the Potaro gold and diamond diggings. In connection with this railway, a tri-weekly service of steamers and steam launches is run on the Demerara and Essequibo rivers.

### Roads.

41. Roads, with an aggregate length of 272 miles and a good motoring surface, extend along the coastlands from Skeldon on the Corentyne River to Charity on the Pomeroon River, and also along the lower reaches of the principal rivers for short distances, but do not penetrate inland. Communication beyond these limits is, generally speaking, by water, but there are also roads in the interior. These are as follows:—

In the North-West District, between Arakaka on the Barima River and Towakaima on the Barima River, a distance of 29 miles, with a branch line to Five Stars, a distance of 17 miles; and from the Barima River, opposite Morawhanna, to Wanaina Creek, a distance of 11 miles, eight of which are suitable for motor traffic. The latter road passes over the Mabaruma hills, on which are situated the Government offices for the administration of the District, a public hospital, etc.

In the Potaro District, between Tumatumari and St. Mary, Konawaruk,  $14\frac{3}{4}$  miles, and Potaro Landing and Minnehaha,  $19\frac{1}{2}$  miles, with a connecting trail from the six-mile post on the former road to the ten-mile post on the latter (known as the Tiger Creek Line), a distance of  $10\frac{1}{2}$  miles, and a trail from the  $1\frac{1}{2}$ -mile post on the Potaro North Fork Road to Kangaruma on the right bank of the River Potaro, a distance of  $5\frac{1}{2}$  miles.

In the Essequibo District, between Bartica on the Essequibo River and Kaburi on the Mazaruni River, a distance of  $78\frac{1}{2}$  miles, and between Lower Camaria and Upper Camaria on the Cuyuni River, a distance of  $3\frac{3}{4}$  miles. Bartica, at the junction of the Essequibo and Mazaruni Rivers, is connected by road to Kaburi on the latter river, and from there trails extend to Potaro Landing on the Potaro River, a distance of 32 miles, and to Tiboku Falls, a distance of about 76 miles, on the Mazaruni River.

42. A cattle trail has been constructed and is being maintained by the Government between Takama on the Berbice River and Annai on the Rupununi River, a distance of 180 miles, with a branch line to Arakwa, a place approximately opposite Wismar on the Demerara River. During 1921, a trace was made of a further branch line starting at a point on the trail 12 miles east of Arakwa and connecting at Hyde Park with the bridle-path and public road

running along the east bank of the Demerara River, but on account of lack of funds this branch line has not yet been constructed.

### **Government Steamer and other Inland Services.**

43. The Colonial Transport Department (owned by Government) operates steamers on the following routes :—

Ferries across the Demerara, Berbice, and Essequibo Rivers.

A steamer service from Georgetown to Morawhanna and Mabaruma, on the Barima and Aruka Rivers, North-West District.

Georgetown to Adventure on the Essequibo Coast.

Georgetown to Bartica at the junction of the Essequibo, Mazaruni, and Cuyuni Rivers.

Georgetown to Pickersgill and other stations on the upper reaches of the Pomeroon River.

Parika to Aurora.

New Amsterdam, on the right bank of the Berbice River, to Paradise, 110 miles up that river.

Launch services are also run as follows :—

Bartica to Matopo on the Cuyuni River.

Charity on the Pomeroon River, up and down the river, and also to Acquero on the Moruka River.

New Amsterdam to Ilkuruwa, up the Canje Creek.

44. Messrs. Sprotons, Limited, operate a steamship service between Georgetown, Wismar on the west bank, and Mackenzie on the east bank, of the Demerara River; also a launch service between Wismar and Mallali on the upper reaches of this river. Sailing craft owned by this Company also run between Georgetown and New Amsterdam. Arrangements can be made through Messrs. Sprotons for visiting the Kaieteur Fall. The journey is by way of the Demerara and Essequibo Rivers, from Georgetown to Wismar on the former river by steamer, thence by train to Rockstone on the latter river, thence by launch to Potaro Landing, thence on foot by a path through the forest seven miles to Kangaruma on the Potaro River, and thence by boat to Tukeit, passing Amatuk waterfall and Waratuk cataract on the way. After leaving Tukeit there is a climb to the top of Kaieteur. The trip to and from the Fall occupies 11 or 12 days, and costs approximately £25 a head for a party comprising not less than six persons.

45. There are approximately 1,000 motor-cars and 90 motor-buses and motor-lorries in use in the Colony, of which, unfortunately, only a small number are of British make. In recent years, however, there has been an increase in the number of British cars imported.

### **Postal.**

46. The Postal Service embraces the whole of the coastlands and extends up the principal rivers. The General Post Office is

situated in Georgetown, and there are 51 branch post offices at which all classes of postal work are transacted, including savings bank, money order, and postal order business. The postal agencies are 20 in number, at eight of which postal orders may be obtained, and the number of travelling post offices is now 10, at four of which postal orders are obtainable. The Post Office also controls the inland telegraph and telephone systems. There are 49 telegraph offices, connected by 574 miles of wire. Up-to-date telephone systems are operated in Georgetown and New Amsterdam, to which there are 1,000 and 125 subscribers, respectively, both exchanges being in continuous service. In addition, there are ten country sub-exchanges, two of which were converted in October, 1927, to a semi-automatic continuous service. A separate police and railway service is operated.

The Georgetown wireless station (taken over from the Admiralty) is in communication with ships at sea and neighbouring points, and a direction-finding station is also maintained. In conjunction with the main station five stations have been established in the interior of the Colony.

## VI.—JUSTICE, POLICE AND PRISONS.

### Justice.

#### THE SUPREME COURT.

47. The work of the Supreme Court may be said to fall into the following divisions:—Civil cases, Criminal cases, Appellate cases, Matrimonial cases, Admiralty cases, Insolvency cases, Probate cases, Petitions, and Parate Execution cases.

*Civil cases.*—These may be said to constitute the most important branch of the work of the Court, as one or other of the three Judges of the Court sits to hear such cases almost continuously throughout the year except during the statutory vacation of the Court in the months of July and August each year. The jurisdiction in civil cases is exercised by any single one of the three Judges of the Court, an appeal from a final judgment of a Judge in cases of amounts exceeding \$250 being provided at present (since 1921) to the West Indian Court of Appeal; while appeals in cases of amounts not exceeding \$250 and in cases of certain kinds of interlocutory orders, go to a bench composed of the other two Judges of the Court, constituting the "Full Court" or "Appeal Court," as is hereinafter stated. In 1927 the Court sat by one or more of its Judges on 108 days (Saturdays not being included) out of the 365. A Judge of the Court sits in what is commonly called the Bail Court every Saturday in the exercise of the summary jurisdiction of the Court provided by Order XII of the Rules of Court 1900 for the hearing of cases of liquidated debt, etc., in which cases the filing of pleadings is dispensed with, the necessary evidence being supplied by affidavit. 420 civil cases were instituted during the year 1927;



while 426 cases were disposed of, withdrawn, or abandoned, the numbers for the years 1925 and 1926 being :—

					<i>Instituted.</i>	<i>Disposed of.</i>
1925	...	...	...	...	445	340
1926	...	...	...	...	366	192

The Court usually sits in Georgetown, where cases from the less important counties of Berbice and Essequibo also are generally heard, but any civil cases required by the Rules of Court to be heard in the County of Berbice are as a rule taken by the Judge at the conclusion of the Criminal Sessions held in that County in February, June, and October each year; the rules provide that Essequibo actions shall be heard in Georgetown, so that the Court never sits to hear civil cases in that County.

*Criminal cases.*—Statutory provision is made for sittings of the Court, in the exercise of its criminal jurisdiction, in every year in each of the three Counties of Demerara, Essequibo, and Berbice, as follows :—In Demerara in the months of January, April, June, and October; in Essequibo in February, May, and October; and in Berbice in February, June, and October. Power is given to the Governor to suspend or postpone any such sitting by proclamation, but this power has very seldom been exercised. The practice has been for two Judges to sit concurrently in Georgetown, the Chief Justice being, as a rule, in what is called “the first Court” and a Puisne Judge in “the second Court.” Only one Judge attends the sittings in Berbice and Essequibo, which are sometimes, but not correctly, referred to as “circuit” sittings. In 1927 the criminal cases for trial included 11 for murder, 6 for manslaughter, and 48 for other offences; these resulted in 7 convictions for murder, 2 for manslaughter, and 34 for other offences. The figures for the years 1925 and 1926 are as follows :—

					<i>Cases.</i>	<i>Convictions.</i>
1925 :						
Murder	...	...	...	...	1	1
Manslaughter	...	...	...	...	6	6
Other Offences	...	...	...	...	83	52
1926 :						
Murder	...	...	...	...	5	2
Manslaughter	...	...	...	...	8	6
Other Offences	...	...	...	...	78	47

A case being stated by the Judge on a question of law arising in the trial, an appeal lies to the West Indian Court of Appeal.

*Appellate cases.*—The “Full Court” (i.e., a Bench composed of the three Judges or not less than two of them) of the Supreme Court sits as a rule every Friday to hear (1) appeals from single Judges and/or (2) appeals from Magistrates, the Court, speaking generally, having jurisdiction only over appeals from certain kinds of interlocutory orders of a single Judge and from final judgments of a single Judge in cases of amounts not exceeding

**\$250** (in both instances the Judge's leave to appeal has to be obtained), while appeals from final judgments of a Judge in cases of amounts exceeding \$250 go at present to the West Indian Court of Appeal. In 1927 the total number of appeals disposed of was 31, as compared with 28 in 1925, and 32 in 1926. Generally speaking, no further appeal from a decision of a Judge or Magistrate lies from the decision of the Full Court.

**Matrimonial cases.**—The jurisdiction in these cases, as in civil cases, is exercised singly by each of the three Judges of the Court. In 1927 the Court dealt with 15 cases of this kind, as compared with five cases in 1925 and 23 in 1926.

**Admiralty cases.**—The jurisdiction in these cases also is exercised by each of the three Judges singly. Cases of this kind are not frequent. In 1927 as in 1926 there was none, while in 1925 there were three.

**Insolvency cases.**—These are usually heard in Georgetown by a Judge in the Bail Court on Saturdays, without regard to whether they arise in Demerara, Berbice, or Essequibo. The Insolvency Ordinance, 1900 (No. 29) is based on the English Bankruptcy Act, 1883. In 1927 the Court dealt with 13 petitions for Receiving Orders, seven being by creditors and six by the debtors themselves, the number of petitions in 1926 being seven (two by creditors and five by the debtors themselves) while in 1925 there were 19 petitions (six by creditors and 13 by the debtors themselves). Seven Administration Orders were made in 1927, as against five in 1926, and two in 1925, and applications for discharge from insolvency were made and granted in those years as follows:—1927, five; 1926, four; 1925, five.

**Probate cases.**—Cases of actions for probate in Solemn form are not frequent. Probate in Common form is usually granted by an Order of a Judge (usually the Chief Justice) on an application paper submitted to him, accompanied by the will, the probate copy of the will, the executor's oath, and the estate duty papers, and a certificate by the Registrar (appended at the foot of the application paper) that the papers are in order for probate. In 1927 there were 334 such applications, as against 314 in 1926, and 225 in 1925. Letters of Administration for intestate estates were granted in 1927 as follows:—

By a Judge (usually the Chief Justice) of the	
Court (estates over \$250) ... ..	82

By the Registrar (estates not exceeding \$250) ...	34
--	----

The figures for the years 1925 and 1926 being as follows:—

	1925.	1926.
By a Judge ... ..	53	45
By the Registrar ... ..	35	37

**Petitions.**—These are required by the Rules of Court to be addressed to, and are dealt with by, the Chief Justice. Some of

them are of a formal nature, e.g., petitions for leave to levy on immovable property pursuant to a Magistrate's Court judgment, and petitions for leave to sell a minor's property, but some are important and involve questions of law. In 1927 there were 191 petitions filed, and 163 Orders on petitions were made, including 26 Fiat Executio Orders, i.e., Orders for leave to levy on immovable property. In 1926 the figures were: 140 petitions filed, 123 Orders made, including 29 Fiat Executio Orders, while in 1925 there were 181 petitions filed, 170 Orders made, including 40 Fiat Executio Orders.

*Parate Execution Proceedings.*—These are relics of the Roman Dutch practice, in which the Judge without a trial makes a summary order for the recovery of debts due to the Colony, Town Taxes, Village Rates, etc., etc. A "Summation" calling on the debtor to pay within a certain time is the first step. On failure to pay within the time stated, the summation is laid before a Judge for his "fiat" which, being granted, the marshal levies on and later, after advertisement, sells the property of the debtor. Proceedings of this kind may be either *in personam* or *in rem*, the latter form being the more common. In 1927, fiats were granted as follows:—Town Taxes, 252; Village Rates, 1,345; other matters, 86; the figures for the years 1925 and 1926 being:—

			1925.	1926.
Town Taxes	...	...	173	256
Village Rates	...	...	1,863	926
Other Matters	...	...	123	71

The Chief Justice of the Colony functions as one of the Judges of the West Indian Court of Appeal, and in that capacity is required to attend sittings of that Court outside the Colony from time to time during each year. In 1927 the Chief Justice attended two sittings of the Court outside the Colony, one at Trinidad in June, and the other at Barbados in September. In that year there was a sitting of the Court in this Colony from the 25th February to the 10th March, at which three appeals were disposed of, all three being allowed.

#### MAGISTRATE'S COURTS.

There are 41 Magistrate's Courts in the Colony. 36,150 cases were instituted in these Courts during the year, of which 16,359 were Civil and 19,791 Criminal. At the beginning of 1927 there were 136 Civil and 142 Criminal cases undisposed of, and during the year, 16,381 Civil and 19,838 Criminal cases were disposed of. At the close of the year there were 114 Civil and 95 Criminal cases pending.

#### Police.

48. The police force is an armed semi-military force employed for the prevention and detection of crime, the repression of internal

disturbances and the defence of the Colony against external aggression.

Crimes reported to or known to the police during the year numbered 14,083. They comprised 25 homicides and 2,606 reports of other offences against the person, 92 cases of praedial larceny and 3,955 reports of other offences against property, and 7,405 reports of other crimes. The numbers of persons proceeded against in connection with the foregoing figures were: 26 for homicide and 1,012 for other offences against the person, 62 for praedial larceny and 1,206 for other offences against property, and 4,771 for other crimes.

No strikes or disturbances of any kind occurred throughout the year.

### Prisons.

49. The prisons of the Colony comprise three main prisons and three small ones in remote and sparsely-populated districts. The two principal prisons are the Penal Settlement at the confluence of the Mazaruni and Cuyuni rivers, containing 306 ordinary cells and an infirmary with one large ward for convicts, one for warders, and six observation cells; and the Georgetown Prison, containing 246 cells, 4 association wards, 2 hospital wards, and 2 rooms for debtors.

The prison staffs together comprise 14 superior officers including prison surgeons and chaplains, 70 subordinate officers and 4 matrons.

Prisoners are employed at various trades supplying the internal requirements of the prisons, on public works and in the cutting of firewood, and their labour is also used on the prison farms. The English Mark System is in force and is applicable to all prisoners sentenced to 12 months and upwards. None of the prisons is on the complete separate system. All prisoners are worked in association, but the principle that each cell should contain one occupant only is strictly observed except in the case of patients in hospital or association wards.

The number of prisoners committed to the different prisons during the year was: males, 1,633, females, 234, total, 1,867.

## VII.—PUBLIC WORKS.

50. During the year the sea defences were well maintained, and all main roads were kept in fair condition. Facilities for prospectors and other workers in the interior, such as the clearing of creeks, the making of bridle-paths and trails, and maintenance of portages around the falls in the various rivers, were maintained. Good progress was made with the drainage and pure-water supply schemes for the more thickly populated areas of the coastlands. The coastal drainage schemes for the counties of Essequibo and Demerara were mostly completed during the year and the residents and farmers appreciate the benefits derived from these works. A total of 20 artesian wells

of an average depth of 750 feet have been completed and all give a good potable water. In addition to the above, the Public Works Department supervised the working of a stone quarry at Seba on the Demerara River, which is operated largely for the supply of granite for the Georgetown Improvement Schemes. The Department expended during 1927 a sum of £224,500 on ordinary maintenance works and small special works for which specific votes were provided in the Annual and Supplementary Estimates.

Work on the Georgetown Improvement Schemes was continued after the termination of the contracts with the late contractors at the end of April, 1927, by direct labour under the supervision of the Resident Engineer. Work on pumping stations has been proceeding satisfactorily, but electrical and pumping machinery has been held up in London, otherwise better progress would have been made. Out of a total of 24 pumping stations 8 stations are in temporary operation and work is proceeding in 8 others. A total of nearly 110,000 feet of completed house connections has been constructed during the past year. Up to date a total of about 41 miles of house-connections work has been laid in Georgetown, and it is hoped that the whole of the works will be completed early in 1930.

### VIII.—PUBLIC HEALTH.

51. The birth and death rates noted below have been calculated on the Registrar-General's estimate of the population of the Colony at the 31st December, 1927, which was 308,473, or 156,051 males and 152,422 females.

10,041 births—5,127 boys and 4,914 girls—were registered during the year. In 1926 the number was 10,653—5,442 boys and 5,211 girls. The birth-rate was 32.6 per 1,000 of the population; that for 1926 was 34.7 and for 1925 33.5. The numbers and birth-rate per 1,000 of the estimated population of each of the several races representing the community were as follows:—

<i>Races.</i>	<i>Births.</i>	<i>Birth-rate per thousand.</i>
Europeans (other than Portuguese)	37	12.4
Europeans (Portuguese) ... ..	183	21.4
East Indians ... ..	5,039	39.3
Chinese ... ..	76	27.0
Aborigines ... ..	246	27.7
Negroes ... ..	3,339	27.3
Mixed Races ... ..	1,118	32.4

Of the births registered, 4,998, or 49.8 per cent., were legitimate, and 5,043, or 50.2 per cent., illegitimate.

The deaths registered were 8,024—4,322 males and 3,702 females. In the previous year the figures were 7,837—4,274 males and 3,563 females. The death-rate was 26.0 per 1,000 of the

population. In 1926 it was 25.5 and in 1925 24.2. The death-rate per 1,000 of the estimated population of the various races was as follows:—

*Races.*

Europeans (other than Portuguese) ...	...	15.7	} 19.4
Europeans (Portuguese) ...	...	20.7	
East Indians ...	...	27.5	
Chinese ...	...	15.2	
Aborigines ...	...	71.5	
Negroes ...	...	23.8	
Mixed races ...	...	19.9	

*Infantile mortality.*—The number of children who died under one year of age was 1,589, or 158 per 1,000 births, in 1927, as compared with 1,696, or 159 per 1,000, in 1926. The following table shows the proportion of deaths of the children under one year of age of each race to every 1,000 births of each such race for the year under review:—

*Races.*

Europeans (other than Portuguese) ...	...	—	} 86
Europeans (Portuguese) ...	...	104	
East Indians ...	...	153	
Chinese ...	...	26	
Aborigines ...	...	394	
Negroes ...	...	163	
Mixed races ...	...	139	

52. During the year the most prevalent disease was malaria, as it always has been. During the latter part of the year this disease was more widespread than usual, resulting in increased sickness and a higher death-rate. There was a fairly widespread incidence of helminthic infection which does not result in grave symptoms as a general rule. The total number of deaths registered as directly due to malaria was 1,715, against 1,234 for 1926, the death-rate being 5.6 as against 4 per 1,000 in 1926. There was a decrease in the number of notified cases of enteric fever, 196 cases being notified in 1927 as against 297 in 1926. The number of cases of tuberculosis notified in 1927 was 289 as against 319 in 1926, the number of deaths being 345 and 326 respectively. No cases of severe epidemic disease such as smallpox occurred during the year, but 31 cases of chickenpox and 28 of diphtheria were notified.

## IX.—EDUCATION.

### Elementary Education.

53. During the school year 1926-27, the enrolment and average attendance of pupils in elementary schools reached the highest figures ever recorded, the number enrolled being 46,105, and the

average number in attendance being 31,250. As the grants to schools are based on the average number of pupils in attendance, the expenditure on elementary education rose accordingly from £77,658 in 1926 to £81,134 in 1927. Of this, £706 was spent on classes for teachers and pupil teachers, of whom 1,443 were employed. In addition to the subjects usually included in the elementary school curriculum, classes in special subjects—gardening, woodwork, and domestic subjects—were carried on at an expenditure of £821. All the elementary schools are aided denominational schools.

### Secondary Education.

54. Facilities for secondary education for boys are provided at one Government school—Queen's College, at St. Stanislaus' College (a Roman Catholic School), and at the Berbice High School for Boys, which is conducted by the Canadian Presbyterian Mission. The latter receives a Government grant of £416 per annum. Secondary education for girls is provided at the Bishop's High School for Girls (Church of England), the Ursuline Convent (Roman Catholic), and the Berbice High School for Girls (Canadian Presbyterian Mission), which receive annual grants of £416, £208, and £208 respectively from public funds. There are also a number of other schools providing intermediate or secondary education which are conducted by individuals or denominations. One of these, St. Joseph's Intermediate School, receives a grant of £100 per annum. During 1927, the total cost of Secondary Education falling on Government funds was £7,697, £3,080 being the approximate net cost on account of Queen's College, and £4,617 being issued as grants to the aided secondary schools already named. The work of these schools is tested principally by the examinations of the Oxford and Cambridge Joint Board, which are taken by the pupils of Queen's College, and of the Cambridge University Local Examinations Syndicate which are taken by the other schools. In 1927 the results were as follows:—

#### OXFORD AND CAMBRIDGE JOINT BOARD.

	<i>Entered.</i>	<i>Passed.</i>
Higher Certificate ... ..	4	1
School Certificate ... ..	9	7
Lower Certificate ... ..	13	8

#### CAMBRIDGE UNIVERSITY LOCAL EXAMINATIONS SYNDICATE.

	<i>Entered.</i>	<i>Passed.</i>
Higher Certificate ... ..	—	—
School Certificate ... ..	41	17
Junior Certificate ... ..	145	69
Preliminary ... ..	133	54

Assistance in obtaining higher education is afforded by various scholarships. The Government annually awards seven scholarships for boys and five for girls, to enable pupils from elementary schools to attend a recognised secondary school for four years or longer. Another Government Scholarship is awarded annually to the boy or girl taking first place in the Cambridge Local Preliminary Examination. Queen's College Scholarships are awarded annually to boys attending Queen's College who reach a certain standard in the Oxford and Cambridge School Certificate Examination. The Guiana Scholarship, which is awarded annually on the results of the Higher Certificate examination of the Oxford and Cambridge Joint Board, and is of the total value of £900, affords a means whereby a student, whether boy or girl, may proceed to a university or institution of university rank in the British Empire. In 1927 this Scholarship was awarded to a girl, for the second time since its establishment in 1882. In addition to the above, certain scholarships have been provided by private benefactions. The Mitchell Foundation gives three scholarships in two years for boys and one annually for girls, all tenable for four years, on the results of the Cambridge Preliminary Local Examination. The Blair Bequest provides biennially a scholarship to a pupil under fourteen years of age from an aided elementary school. A Trust Fund, created under the will of Pierre Louis de Saffon, a resident of the Colony who died over a century ago, undertakes the education and maintenance of a certain number of boys and girls, the number varying according to the revenue derived from the Fund.

55. During 1927, the chief event of educational interest has been the passing of an Ordinance to establish an Education Committee. This Committee will advise the Director of Education upon all forms of education in the Colony, and it is hoped that the new central authority will exercise more control over the expenditure of educational grants than has hitherto been the case, and so ensure greater efficiency and progress in return for the expenditure incurred by the Colony.

### **Industrial Education.**

56. Industrial education in the Colony is provided for by the Industrial Training Ordinance No. 6 of 1910 and the Government Industrial School Ordinance No. 8 of 1907. A Board of Industrial Training, appointed under the first-named Ordinance, provides for the indenture of apprentices in different trades, such as engineering, building, printing, shipping, clothing, etc. Ordinance 8 of 1907 makes provision for the instruction and training of vagrant boys and youthful male offenders under the age of 16 years and until the age of 18.



The Onderneeming Industrial School, which was established under the latter Ordinance, has accommodation for 200 boys. The number of inmates on the 31st December, 1927, was 149, whilst the daily average during the year was 151.94. The actual net cost to the Colony per boy per diem was 15½d. as against 14½d. for 1926. About 45 per cent. of the inmates have been trained in agriculture on the school farm, where coffee, cocoa, rubber, limes, and coconuts are grown and cured. Of the remainder, a number of boys are trained in the baking of bread, in carpentry and in tailoring. Practical use is being made of the carpenter's shop, which carries out minor repairs to the school buildings and makes rough school furniture for the Education Department. The bakery supplies bread, not only for the schools but for the Suddie Hospital and for sale to residents of the neighbourhood. A number of boys are also being trained in the school factory, where distilled oil of limes and concentrated lime juice are manufactured, corn-meal is ground, and rice hulled and cleaned. The school is run on purely educational lines, and the boys are taught to look on the institution as a place of improvement and not of punishment.

## X.—LANDS AND SURVEY.

### Lands.

57. The total area of the Colony is 57,266,874 acres. Of this, 740,847 acres had been absolutely alienated at the end of 1927, principally along the coastal belt for a distance of two to three miles in from the coast, but partly up the tidal portions of the rivers. Most of this land was alienated during the Dutch occupation and very little is now sold outright, the present policy being to lease Crown lands for periods up to 99 years with right of renewal for a further similar period rather than dispose of them outright. Small homesteads up to 10 acres are sold under conditional grants if desired, but the majority prefer to lease and only 388 acres were issued under grant in 1927. The area held under leases and licences of occupancy for long-time periods at the end of 1927 totalled 246,552 acres.

58. About 88 per cent. of the area of the Colony is forest covered, the total area in forest being estimated at 50,355,200 acres. Owing to the rivers being cataract-barred and the absence of railways, only about seven million acres of forest land can be regarded as commercially accessible. Of this, about 476,882 acres were held under lease and licence for woodcutting purposes at the end of 1927. Balata gum is collected over a very large area of the forest and forms a valuable export, and at the end of 1927 licences to collect balata covered about 17,120,000 acres.

59. Apart from the land artificially cleared for agriculture, the unforested area consists of "savannahs" (or open grass and scrub

lands) much of which provides rough grazing of varying value. These are divided into the coastal or wet savannahs which mostly lie behind the agricultural estates on the coast and unless empoldered and drained are of little use for grazing in the wet seasons; the intermediate or "sand and scrub" savannahs mostly situated within tidal influence on the Berbice and Demerara rivers; and the "hinterland" savannahs lying beyond the Pakaraima sandstone plateaux. These latter are joined to the Berbice and Demerara savannahs by a cattle trail about 120 miles long through the forest, which was constructed and is maintained by Government. At the end of 1927 about 1,571,530 acres of savannah land were held under grazing rights, mostly on a yearly title renewable as of course each year if the terms have been complied with (unless required for more important purposes, which is a remote possibility in most cases) and about 1,465,086 acres were held under grazing leases for periods up to 99 years. There is little or no export trade in cattle at present, but the local market is plentifully supplied with beef and milk and a small export trade is done in hides.

### Survey.

60. All surveys for issue of title for Crown lands are carried out by Government. Agricultural tracts are surveyed precisely and connected up to other surveyed tracts wherever possible to enable them to be accurately shewn on the cadastral maps. No framework survey of the Colony has yet been made and the work of connecting up tracts laid out for issue of title was neglected in years gone by with the result that there is much traverse work to be done up all the rivers before reliable plans can be drawn. This work is now being steadily if slowly carried on so far as funds will permit, but the absence of plans in the early period following the Dutch occupation has led to the unsatisfactory layout of holdings in many districts. The area precisely surveyed for issue of title in 1927 totalled 2,117 acres and 38 miles of traverse.

61. Areas taken up under woodcutting licences are surveyed by chain and compass and are connected by compass and pacing or time and compass surveys along the trails and creeks wherever practicable. The area surveyed for wood-cutting purposes in 1927 totalled 5,722 acres.

62. In 1919 reconnaissance surveys were commenced to ascertain the possibility of railway or road construction to the diamond fields in the upper Mazaruni and Puruni areas. Several routes were reconnoitred and in 1927 a Railway Engineer from the Malay States Railways (Mr. John Leggate) was seconded to investigate matters and advise. After careful investigation and consideration of the data already obtained, Mr. Leggate advised that concentration of all the traffic (which is small) to the gold, diamond, and balata

fields of the interior is necessary if a reasonably economic result is to be obtained and that the particular needs of the diamond fields would best be served by branches from such a general line of transport to the interior. Additional reconnaissance surveys were carried out under his direction from Kangaruma on the Potaro River to a point on the Mazaruni River just above Tiboku Falls and a good location suitable for road or railway construction obtained. Mr. Leggate advised, however, that railway construction was not justified at present or likely to be in the immediate future and recommended the adoption of a combination of river and land lines, the latter to be constructed as natural surface roads to be operated over by suitable motor vehicles until development of the industries and consequent increase of traffic warranted improvement to a first-class highway or railway as the case might be.

63. As the question of economic feasibility of railway or road construction to the diamond fields depended greatly on the extent of the diamond and other resources in the area to be served thereby, it was decided in 1924 to carry out a framework and economic survey of the area lying between the Essequibo, Mazaruni, and Cuyuni rivers. By the end of 1927, standard traverses and levels to the high degree of accuracy required for framework purposes have been carried along the Essequibo and Mazaruni rivers for a distance of about 170 miles, together with extensive secondary traverses, river bank surveys, river soundings and current meter readings in connection therewith. An area of about 200 square miles of the actual diamond fields had been topographically surveyed in detail and the estuary of the Essequibo River itself triangulated and sounded from its mouth to a point near the first falls. An area of about 708 square miles had been valued for timber by the Forest Department in the Bartica-Tiboku-Potaro triangle and a preliminary geological survey of about 3,294 square miles of country had been completed by the Government geologists. All this work is continuing and several reports have already been published.

## XI.—LABOUR.

64. Labour in the Colony may be classed under the heads plantation labour (sugar and rice), forest labour (gold and diamond fields, balata collecting, and woodcutting), and labour in towns (porters, &c.). As regards plantation labour and labour for the rice fields, these are supplied mainly by East Indians, and the extension of these industries at the present time is hampered somewhat by a shortage of this class of labour. Labour for the forest industries and manual labour in the towns is confined mainly to negroes and those of negro descent, and the supply is sufficient for existing needs.

## XII.—MISCELLANEOUS.

**Legislation.**

65. There were forty-four public Ordinances and four private Ordinances passed during the year. The principal of these were :—

*The Drainage and Irrigation Ordinance, 1927 (No. 7).*—Makes provision for carrying out works of drainage and irrigation in areas on the coastlands which the Governor-in-Council has declared as areas which will be benefited by such works.

*Carriage of Goods by Sea Ordinance, 1927 (No. 8).*—At the International Conference on Maritime Law held at Brussels in October, 1922, the delegates at the Conference, including the delegates representing His Majesty, agreed unanimously to recommend to their respective governments to adopt as the basis of a convention a draft convention for the unification of certain rules relating to bills of lading. At a meeting held in Brussels in October, 1923, the rules contained in the draft Convention were amended by the committee appointed by the Conference. This Ordinance gives to the rules as so amended and as set out with modifications in the Schedule to the Ordinance, and subject to the provisions of the Ordinance, the force of law with a view to establishing the responsibilities, liabilities, rights, and immunities attaching to carriers under bills of lading. The Ordinance follows the Carriage of Goods by Sea Act, 1924, 14 and 15 Geo. 5. ch. 22.

*Arbitration Clauses (Protocol) Ordinance, 1927 (No. 16).*—This Ordinance gives statutory effect to the accession of the Colony to a Protocol on Arbitration Clauses signed on behalf of His Majesty at a meeting of the Assembly of the League of Nations held on the 24th September, 1923. The Ordinance is an adaptation of the Arbitration Clauses (Protocol) Act, 1924, 14 and 15 Geo. 5. ch. 39.

*The Bankers (Draft on Branches) Protection Ordinance, 1927 (No. 21).*—Gives protection to bankers who may have paid orders on forged endorsements. Section 60 of the Bills of Exchange Ordinance, 1891, protects a banker on whom a bill payable to order on demand is drawn if he pays the bill in good faith and in the ordinary course of business on a forged or an unauthorised endorsement. Where, however, the banker pays under similar circumstances a draft or order drawn by him on one of his principal or branch banks he obtains no protection because such draft or order is not a "bill" within the definition of the term. The Ordinance enacts that the expression "bill" in section 60 of the Bills of Exchange Ordinance, 1891, shall be deemed to include a draft or order payable to order on demand drawn by a banker on his principal or any of his branch banks within the Colony. In England protection is given in such cases by section 19 of the Stamp Act, 1853, and in some other Colonies legislation similar to this Ordinance has been recently adopted.

*The Wireless Telegraphy Ordinance, 1927 (No. 23).*—Extends the provisions of the Wireless Telegraphy Ordinance, 1910, to air-

craft and visual or sound signalling stations. Power is also given to the Governor during the continuance of an emergency to make rules with respect to the possession, sale, purchase, construction, and use of apparatus for wireless telegraphy or visual or sound signalling.

*The Forest Ordinance, 1927 (No. 29).*—Makes provision for the protection and control of forests and forest produce. The Ordinance follows on the general lines of the Forest Ordinances which have been adopted from time to time by other Colonies.

*The Coroners Ordinance, 1927 (No. 28).*—Is an adaptation to local circumstances of section 20 of the Coroners (Amendment) Act, 1926 (16 & 17 Geo. 5. ch. 59). It amends the Ordinance of 1887 by providing that if prior to the commencement of an inquest, or if on an inquest before the jury have given their verdict, the coroner is informed that some person has been charged with the murder or manslaughter of the deceased, he shall unless directed to the contrary by the Attorney-General abstain from holding an inquest, and in the other case he shall adjourn the inquest until after the criminal proceedings and discharge the jury, but he shall not resume the inquest unless he is so directed by the Attorney-General. When an inquest is held or resumed if on the criminal proceedings a person has been charged on indictment no inquisition shall charge that person with an offence of which he could have been convicted or contain any finding inconsistent with the determination of any matter by the result of those proceedings.

*The Indictable Offences (Prevention of Corruption) Ordinance, 1927 (No. 38).*—This Ordinance is an adaptation of the Prevention of Corruption Acts, 1906 and 1917 (6 Edw. 7. ch. 34 and 6 and 7 Geo. 5. ch. 64) which has been adopted in most parts of the Empire, and deals with those offences which are triable by indictment under the Acts referred to and the punishments are similar.

*The Summary Conviction Offences (Prevention of Corruption) Ordinance, 1927 (No. 39).*—Is an adaptation of the Prevention of Corruption Acts, 1906 and 1917 (6 Edw. 7. ch. 34 and 6 and 7 Geo. 5. ch. 64), and deals with the offences which under the English Acts are punishable on summary conviction and the punishments are similar.

### Visits to the Colony.

66. Mr. Harold T. Pooley, General Secretary of the British Empire Producers' Association, visited the West Indies early in the year, and arrived in this Colony in February.

Mr. Pooley's object in coming to the West Indies was to acquaint himself with the economic problems of the Colonies and to confer with local Associations connected with the Empire Association with respect to the stimulation of production and improving the transport and marketing of produce.

67. In March the Colony was visited by a squadron of three Army 'planes from the United States, which were carrying out a

Pan-American "Good Will" flight, and during the same month the Italian seaplane S.55, with Colonel the Marchese de Pinedo as pilot, touched at Georgetown on his memorable flight over four continents.

### XIII.—GOVERNMENT PUBLICATIONS.

68. The following publications of the British Guiana Government are on sale at the offices of the Crown Agents for the Colonies, 4, Millbank, Westminster, London, S.W.1, and at the office of the Government Trade Commissioner for British Guiana in London, at the prices indicated:—

Handbook of the Colony	...	...	1s. each.
Agricultural Journal of British Guiana	...	...	6d. each.
"Rubber and Balata in British Guiana"	...	...	6d. each.
"Timbers of British Guiana"	...	...	5s. each
Memorandum of terms on which Crown Land can be bought.	...	...	2d. each.
Annual Reports of—			
Colonial Transport Department	...	...	} 1d. per page with maximum charge of 1s. each.
Comptroller of Customs	...	...	
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Local Government Board	...	...	
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Postmaster-General	...	...	} 2d. per page with maximum charge of 2s. per Ordinance.
Registrar-General	...	...	
Harbour Board	...	...	
And any others likely to be of interest	...	...	
Copies of British Guiana Ordinances likely to be of interest to persons outside the Colony.	...	...	
Regulations passed under these Ordinances	...	...	
Volumes of revised edition of the Laws of British Guiana to 1921.	...	...	
Blue Book	...	...	6 guineas per set (half calf).
Combined Court papers and Court of Policy papers likely to be of interest to persons outside the Colony.	...	...	5 guineas per set (stiff paper).
Copies of Railway tariffs and time tables	...	...	£1.
Report of a Preliminary Survey of the Mazaruni and Puruni Diamond Fields, British Guiana (Part I), by Mr. H. J. C. Connolly.	...	...	1d. per page with maximum charge of 1s. Free of charge.
	...	...	15s. per copy (at the Crown Agents).

G. D. OWEN,

*Acting Colonial Secretary.*

15th June, 1927.

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Summary of Proceedings. Cmd. 2768 ... 1s. 0d. (1s. 1d.)

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Secretary of State for the Colonies.

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## COLONIAL AGRICULTURE.

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SWAZILAND.

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REPORT FOR 1927.

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# SWAZILAND.

## ANNUAL REPORT FOR 1927\*.

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### PREFACE.

#### **History.**

The Swazis are akin to the Zulu and other tribes of the south-eastern littoral. Up to about 100 years ago they occupied the country just north of the Pongolo River, but a hostile chief in their vicinity forced them farther north and, under their Chief Sobhuza, they then occupied the territory now known as Swaziland. This Chief, who died in 1839, was succeeded by Mswazi II. The further order of succession has been Ludonga, Mbandini, and Bhunu, whose son, Sobhuza II, was installed as Paramount Chief in 1921, after a long minority, during which his grandmother, Labotsibeni, acted as Regent.

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\* In this Report the Financial Statements, which are for the year ended 31st March, 1928, are preliminary and not completely audited. All other details are for the calendar year 1927

The many concessions granted by Mbandini necessitated some form of European control, notwithstanding that the independence of the Swazis had been guaranteed in the Conventions of 1881 and 1884, entered into between the Government of Her late Majesty Queen Victoria and the Government of the late South African Republic. In 1890, soon after the death of Mbandini, a Provisional Government was established representative of the Swazis and the British and the South African Republic Governments. In 1894, under a Convention between the British and the South African Republic Governments, the latter was given powers of protection and administration, without incorporation, and Swaziland continued to be governed under this form of control until the outbreak of the Boer War in 1899.

In 1902, after the conclusion of hostilities in the Transvaal, a Special Commissioner took charge, and, under an Order in Council (1903), the Governor of the Transvaal administered the Territory, through a local officer, until the year 1907, when, under an Order in Council (1906), the High Commissioner assumed control and established the present form of administration. Prior to this, steps had been taken for the settlement of the concessions question by the definition of the boundaries of the land concessions and their partition between the concessionnaires and the natives. The boundaries of the mineral concessions were also defined and all monopoly concessions were expropriated. Title to property is therefore now clear. In this connection a case brought by the Paramount Chief has been dismissed, on appeal, by the Privy Council (1926).

An elected Advisory Council, representative of the Europeans, was established in 1921, to advise the Administration on purely European affairs.

### Geography.

Swaziland lies between the eastern slopes of the Drakensberg Mountains, which form the eastern border of the Transvaal, and the low-lying lands of northern Zululand and Portuguese East Africa.

It is bounded on the north, west, and south by the Transvaal, and on the east by Portuguese territory and Tongaland, now part of the Natal Province, and is about the size of Wales, its area being 6,704 square miles. A little more than one-third of the Territory is native area and the remainder is owned by Europeans.

### Description.

The Territory is divided geographically into three longitudinal regions of roughly equal breadth, running from north to south, and known locally as the high, middle, and low or bush veld. The high veld portion adjoining the eastern Transvaal consists of



mountains, part of the Drakensberg Range. These mountains rise in parts to an altitude of over 5,000 feet.

The middle veld is about 2,000 feet lower, while the bush veld, bounded on the east by the Ubombo Mountains, has a height of from 300 to 1,000 feet, rising on the Ubombo Mountains to 1,500 feet.

Both the rainfall and the temperatures vary considerably with the altitude of the meteorological stations, which are under the control of the Chief Meteorologist of the Union Government. The average rainfall at two stations was :—

Mbabane (3,800 feet), 53.12 inches over 24 years,

Bremersdorp (1,800 feet), 32.35 inches over 25 years.

The mean summer and winter temperatures were 75° Fahr. and 60° Fahr. respectively.

The three principal languages are English, Afrikaans, and Swazi. British, Transvaal, and Union of South Africa currencies are in circulation. Imperial weights and measures are in use, and Cape land measure.

### I.—GENERAL.

During the year, the Right Honourable L. S. Amery, P.C., M.P., Principal Secretary of State for Dominion Affairs, paid a visit to the Territory. In the short time at his disposal he met a large number of the inhabitants. The fact that he was able to pay the visit in spite of the many calls on his time was much appreciated by the residents in the Territory, who were pleased at the interest he displayed in their affairs and his sympathetic attitude towards their needs.

Shortly before the close of the financial year His Honour the Resident Commissioner, Mr. de S. M. G. Honey, C.M.G., was transferred as Governor and Commander-in-Chief of the Colony of Seychelles.

The relations between Europeans and natives continued to be excellent.

European immigrants numbered 175 and emigrants 57.

The last census of population was held in May, 1921, and the total number of Europeans then was 2,235, and is estimated now at 2,530. The native Bantu population in 1921 was 110,295, the number of females being a little in excess of males.

### II.—FINANCE.

#### Revenue and Expenditure.

The revenue for the financial year ended on the 31st March, 1928, amounted to £90,706, which is £1,953 less than the revenue for the preceding year and £144 less than the estimate.

## SWAZILAND, 1927.

The expenditure for the year amounted to £103,681, which is £8,480 less than the expenditure for the preceding year and £1,169 less than the estimate.

The following table shows the revenue and expenditure for the past five years :—

### REVENUE.

		1923-24.	1924-25.	1925-26.	1926-27.	1927-28.
		£	£	£	£	£
Ordinary ...	...	80,266	80,817	87,813	87,246	84,488
Extraordinary ...	...	10,741	9,243	22,319	5,413	6,218

### EXPENDITURE.

		1923-24.	1924-25.	1925-26.	1926-27.	1927-28.
		£	£	£	£	£
Ordinary ...	...	85,718	79,669	85,076	85,542	88,659
Extraordinary ...	...	7,444	7,955	11,905	26,619	15,022

### Public Debt.

The Public Debt amounted to £55,000, consisting of :—

(1) The Swaziland Consolidated Loan amounting to £35,000, bearing interest at  $3\frac{1}{2}$  per cent. per annum, and repayable by a Sinking Fund in 19 years from the 1st April, 1924. The amount standing to the credit of the Sinking Fund on the 31st March, 1928, was £5,644.

(2) The Swazi Nation Trust Fund, £20,000, bearing interest at the rate of 4 per cent. per annum.

### Assets and Liabilities.

On the 31st March, 1928, liabilities exceeded assets by £63,954 14s. 5d., inclusive of the Swazi Nation Trust Fund mentioned above, an increase of £12,974 13s. 10d. during the year.

### Income Tax.

The receipts from Income Tax amounted to £3,025 15s.

The following shows the classification of the sources of the incomes subject to the tax :—

						Per Cent.
Mining ...	...	...	...	...	...	52
Trading and farming ...	...	...	...	...	...	30
Civil Servants ...	...	...	...	...	...	15
Professions ...	...	...	...	...	...	3

### III.—PRODUCTION.

#### (i) Stock.

At the end of the year there were approximately 75,000 European-owned cattle in the Territory and 275,000 native-owned.

8,012 head of cattle were exported to the Union for slaughter purposes. Of this number, 6,112 went to the Johannesburg abattoirs and the remainder, 1,900, via Gollé and Zululand to Durban.

No serious stock disease outbreaks occurred. As in the past, the work of the Veterinary Department was directed against East Coast Fever. At the beginning of the year there were seven infected areas, and six of these were released from quarantine during the year. One new outbreak occurred. Only three head of cattle died from East Coast Fever in 1927, the most satisfactory position for 25 years and a very gratifying result of the Veterinary Department's energetic inspection of cattle and supervision of dipping, which has been made possible by the loyal co-operation of all stock owners, both European and native. In certain cases of diagnosis of East Coast Fever, by means of smears only, in calves, and where only one animal dies, in areas remote from known infected areas, and no possible means of the spread of infection can be suggested, the Principal Veterinary Officer considers that possibly Koch's bodies may be associated with some disease other than East Coast Fever.

*Anthrax.*—There were three outbreaks of this disease. The infected herds were vaccinated, with excellent results, and up to the end of the year no further deaths have occurred. Only ten head of cattle died from this disease.

*Black Quarter.*—The disease of Black Quarter is enzootic throughout the Territory. As a result of the compulsory taking of blood smears from all animals that die, the most infected parts have been located. Inoculation against this disease with vaccine prepared at the Onderstepoort Laboratory is most efficacious.

*Heartwater.*—This disease causes a small mortality amongst the locally-bred cattle every year, but with consistent dipping it will gradually be overcome.

*So-called Sweating Sickness of Calves.*—This affection was less prevalent during the year.

*Horsesickness.*—This disease was mild.

*Snotziekte.*—A form of nasal catarrh in cattle, introduced by an invasion of large numbers of wildebeeste from the Transvaal, caused a fairly large mortality amongst ranch cattle in the northern section of the low veld.

The cattle-dipping tanks in commission throughout the year numbered 153, and in the western half of the Territory there are several tanks in which all sheep and goats were dipped from March

to May, as a prevention against scab. Forty-five cases of scab were reported during the year. Approximately 400,000 sheep came in from the Union for winter grazing.

The Union Government Laboratories continued to render much valuable assistance in the examination of blood smears and in many other directions.

### (ii) Agriculture.

Crops were slightly above the average.

Owing to the enhanced prices for tobacco realized on the world's market in 1927 and to the good services of the Government Tobacco Adviser, an increased acreage was planted, the yield being approximately  $1\frac{1}{4}$  million pounds. The growing of the light cigarette type of tobacco leaf, which is considered possible in certain parts of the Territory, is being encouraged, particularly on account of the present over-production by tobacco growers throughout the Empire of dark heavy types.

The cotton production showed a decrease owing to a smaller acreage being planted and to the depredations of the jassid, boll worm, and other pests. The yield will continue to be low until an ample supply of jassid resistant seed is available, in connection with which a good deal of work has been carried out by Mr. R. C. Wood, the Cotton Specialist of the Empire Cotton Growing Corporation, and his successor, Mr. D. MacDonald.

Maize, kaffir corn, beans, and groundnuts yielded very satisfactory returns.

The usual Agricultural Shows were held at Bremersdorp and Hlatikulu with fair success.

### (iii) Forestry.

The thickly-bushed low veld areas and isolated small mountain forests contain little timber of any commercial value. Owing to the boom in wattle bark prices, many who had established wattle plantations in the high and middle veld in earlier years realized good prices for bark.

### (iv) Mining.

Mining is conducted under mineral concessions granted by the late King Mbandini and under the Crown Minerals Order in Council.

Tin mining continued in the vicinity of Mbabane and gold mining on a small scale at Piggs Peak, but there was no exploitation of importance elsewhere. Towards the end of the year a Crown Mineral Area near Mbabane was thrown open to the public for prospecting and mining and a large number of base metal claims were pegged.

**(v) General.**

The following is a summary of the products, quantities (in pounds) and values, exported during the five years ended the 31st December, 1927 :—

SLAUGHTER CATTLE.						
		1923.	1924.	1925.	1926.	1927.
lb.	...	3,000,000	4,478,400	4,681,600	3,334,200	4,767,000
£	...	45,000	64,688	36,759	44,456	63,560
TOBACCO.						
lb.	...	322,350	240,500	250,190	780,000	1,262,500
£	...	8,140	7,909	6,981	22,750	36,825
COTTON (UNGINNED).						
lb.	...	171,000	373,370	430,000	565,000	316,000
£	...	3,056	6,221	7,013	9,400	7,900
COTTON (GINNED).						
lb.	...	73,800	72,850	59,725	132,100	73,500
£	...	5,175	3,640	2,984	4,500	3,370
HIDES.						
lb.	...	37,000	33,644	38,360	135,000	243,770
£	...	1,054	1,298	1,038	3,940	10,157
METALLIC TIN.						
lb.	...	337,713	539,907	621,600	424,507	343,934
£	...	29,240	59,082	67,722	52,947	42,776
WATTLE BARK.						
(1927 only)						
lb.	...	...	...	1,194,000		
£	...	...	...	6,576		

**IV.—TRADE AND ECONOMICS.**

By an agreement with the Government of the Union of South Africa, dated the 30th June, 1910, Swaziland is dealt with for Customs purposes as part of the Union. Payments due to Swaziland are assessed on a fixed proportion of the total Customs collection of the Union in each year. No statistics of imports are therefore kept. The amounts received by Swaziland under the Customs Agreement during the last three financial years were: 1925-26, £15,085; 1926-27, £15,667; 1927-28, £15,738. The above amounts include collections in Swaziland in respect of spirits and beer manufactured in the Union, as follows: 1925-26, £1,225; 1926-27, £1,293; 1927-28, £1,145. The imports consist principally of maize, flour, groceries, wearing apparel, kaffir truck, hardware, machinery, building material, &c., most of which are imported from the Union of South Africa through wholesale firms established there. The principal exports are enumerated under III above.

The cotton is exported to the United Kingdom, tin through the Union to the Straits Settlements, and all other commodities to the Union of South Africa.

The volume of trade was small during the year under review. The native crops were better than usual. Farmers found some difficulty in disposing of their maize crop. In a season when the native crops are bad a considerable trade in maize is carried on.

The prices of food-stuffs were comparatively high owing to distances from railheads, but not higher than usual.

## V.—COMMUNICATIONS.

There are no railways in the Territory, but the South African Railway Administration have now (1928) established motor transport services on the main routes in Swaziland. These should be of great benefit to the Territory, enabling farmers not only to export their produce at a lower cost but to import fertilizers and other requirements such as fencing materials, &c., at a considerably reduced rate.

There are 373 miles of main roads and much has been done in the past few years to maintain these in fair condition.

Branch roads, which present little difficulty for motoring in the dry season, cover about 435 miles.

The postal services are, by agreement, controlled by the Postmaster-General of the Union of South Africa, but are paid from Swaziland funds. The only telegraph office is at Mbabane, connecting with the Transvaal. By the end of the year there were 224 miles of telephone lines in operation, mostly along main routes, and, with the exception of Mankaiana, all district offices are now connected up. Considerable lengths of these telephone lines have been erected with wooden poles, but it is hoped that funds will permit soon of the substitution of iron poles.

There is no public wireless service, but a few individuals have established private wireless receiving sets.

## VI.—JUSTICE, POLICE, AND PRISONS.

In 1912 a Special Court was established, with an Advocate of the Provincial Division of the Transvaal as President. The other members of the Court consist of the Resident Commissioner, the Deputy Resident Commissioner, and the Assistant Commissioners of the various districts. The Court holds sessions twice a year. All cases are dealt with by three members sitting without a jury. This Court has jurisdiction in civil and criminal cases. When it is not in session the Resident Commissioner or Deputy Resident Commissioner, as a member of the Special Court, is competent to review the criminal proceedings of the Courts of Assistant Commissioners and to exercise the civil jurisdiction of the Special Court in all motions and applications and in all actions for provisional sentence.

Death sentences can be carried out only upon the special warrant of the High Commissioner. There is a right of appeal to the Privy Council against any final judgment of the Special Court when the matter in dispute is of the value of £500 or upwards. Courts of Assistant Commissioners with jurisdiction in civil and criminal cases were established under the Swaziland Administration Proclamation, 1907. Appeals lie from these Courts in all cases, civil and criminal, to the Special Court of Swaziland.

The Paramount Chief and other native chiefs continue to exercise jurisdiction according to native law and custom in all civil disputes in which natives only are concerned. Appeal lies to the Resident Commissioner, whose decision is final.

In 1927, in the Special Court 46 persons were convicted and in the Assistant Commissioners' Courts 3,494 persons, of whom 2,269 were convicted for offences against Revenue and Pass Laws, &c.

The convictions in the Special Court were for the following crimes :—

Murder	...	...	...	...	...	...	19
Attempted Murder	...	...	...	...	...	...	2
Culpable Homicide	...	...	...	...	...	...	20
Rape	...	...	...	...	...	...	1
Offences against Property	...	...	...	...	...	...	4

The Swaziland Police Force was established under the Swaziland Administration Proclamation, 1907. The personnel consists of :—

*European.*—1 Staff Officer, 1 Warrant Officer, 18 Non-Commissioned Officers and men ;

*Native.*—1 Native Officer and 134 Non-Commissioned Officers and men.

The principal prison is at Mbabane, and there are prisons at Hlatikulu, Mankaiana, Stegi, Bremersdorp, and Piggs Peak. All available convict labour is used on the roads.

## VII.—PUBLIC WORKS.

The Public Works Department is under the control of a Government Engineer, and he is assisted by the Assistant Commissioners, who carry out road inspections in their districts so far as possible.

No extensive building operations took place during the year. No new roads of importance were made but an average of 10 to 12 road parties were employed in repairing and improving existing roads.

## VIII.—PUBLIC HEALTH.

The general health of the community was good. The Territory was abnormally free from malaria. There were a few cases of typhoid and pneumonia. There was as usual a fair amount of

scurvy, of a mild type, amongst the natives. The incidence of syphilis showed no apparent diminution, but more natives came forward voluntarily for treatment.

At the end of the year there were five doctors practising in the Territory. There are Government hospitals at Mbabane and Hlatikulu (in course of completion), and Mission hospitals at Bremersdorp and Mahamba, which are subsidized by the Government, as well as dispensaries at the Peak and Stegi. At the three hospitals, Mbabane, Bremersdorp, and Mahamba, totals of 476 in-patients and 11,853 out-patients were treated.

### IX.—EDUCATION.

There is one school, St. Marks, Mbabane, for secondary education and 11 Government primary schools in the districts. The average attendance during the last three years was as follows :—

1925	...	...	...	...	...	...	...	325
1926	...	...	...	...	...	...	...	385
1927	...	...	...	...	...	...	...	445

At the two schools for coloured children there were 69 pupils, as against 59 in 1925 and 54 in 1926; and at the Zombode native school the average attendance was 146, as against 89 in 1925 and 150 in 1926.

In addition, the various Missions conduct schools and classes of an elementary nature in connection with their Mission work for natives, the attendance in 1927 being 3,458, and a Government grant of £1,350 was contributed proportionately to attendance. In 1925 and 1926 the attendances were 2,958 and 4,065 respectively.

Suitable arrangements were made for a single inspection of each school, both European and native, during the year.

### X.—LANDS AND SURVEYS.

Title to land in Swaziland is freehold, subject to the mineral rights which are in some cases owned by concessionnaires and in others by the Crown.

Land registration is effected in the Swaziland Deeds Office under the charge of the Registrar of Deeds for the Transvaal, and Surveys are controlled by the Surveyor-General for the Transvaal, also at Pretoria. All land and mineral concessions and the native areas were surveyed during the years 1904 to 1908, and since then many subdivisional surveys of private and Crown Lands have been carried out.

Only about 20 acres of unencumbered Crown Land were disposed of during the year, in small plots adjoining townships.



A township was established at Stegi on the Lebombo Mountains, and at the four other townships, Mbabane, Bremersdorp, Hlatikulu, and Goedgegun, a few *erven* were sold for residential and trading purposes.

No surveys of importance were undertaken, nor has there as yet been any geological survey of the Territory.

### XI.—LABOUR.

Labour, though generally not plentiful, was adequate for farming, mining, road making, and domestic purposes, on reasonable scales of wages. A few farmers who grow cotton fairly extensively experienced a little difficulty in engaging a sufficient number of native women and girls for cotton-picking at the required time.

Natives desiring to enter into contracts as labourers on the mines in the Union continued to take advantage of the deferred-pay system, the sum of £9,344 being paid out, as compared with £12,169 in 1926. The number of passes issued was 4,794 to recruited labourers and 8,411 to those desiring to travel outside the Territory generally to seek work on farms.

### XII.—MISCELLANEOUS.

The most important item of legislation was the promulgation of the Mineral Concession Areas (Swaziland) Proclamation, which provides, *inter alia*, for consents by concessionaires to the throwing open for prospecting by the Administration of their areas, other than portions within native areas, or failing such consent to the payment of an undeveloped mineral tax on unexploited areas.

Minor legislation consisted on the following Proclamations:—

- (1) No. 6/1927. The Swaziland Radio Proclamation;
- (2) No. 7/1927. Imposing, for a limited period, a special tax on natives of Swaziland for the liquidation of debts incurred on behalf of the Swazi nation;
- (3) No. 22/1927. Consolidating and amending the laws in force relating to the registration of births, marriages, and deaths.

L. J. PUTTICK,

*Acting Government Secretary*

MBABANE, SWAZILAND.

23rd June, 1928.

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Report for 1927.

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# FEDERATED MALAY STATES.

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## REPORT

OF THE

## CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1927.

### P R E F A C E.

#### HISTORY.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

#### PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.



Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Idris.

#### SELANGOR.

In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendancy, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

#### NEGRI SEMBILAN.

This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants

of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelevu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Seriting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelevu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelevu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

#### PAHANG.

Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the

old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

#### CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

#### THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council,

as now constituted, consists of the High Commissioner for the Malay States (an appointment held *ex officio* by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, the four British Residents, the Legal Adviser, the Financial Adviser, the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, one Official Member nominated by the High Commissioner, and eleven Unofficial Members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

#### GEOGRAPHY.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

Selangor (3,156 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

## CLIMATE.

The temperature of the West Coast of the Malay Peninsula has but small daily range and little appreciable variation. On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. Records from the typical stations on the West of the Peninsula, where the South-West Monsoon is broken by Sumatra, show a decrease of rainfall from May to August. At Kuala Lipis on the east of the main range, there is a general rise of rainfall from February until May, succeeded in some years by a distinct drop in July and August; there is a further rise culminating in October and November followed by a fall to moderate rainfall in December and January. Charts, however, cannot bring out two points: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more, when the grass becomes parched. In the mountains the rainfall is comparatively high, particularly in the Larut Hills above Taiping where the average at "The Cottage" (Maxwell's Hill) (4,513 feet) for the years 1904-1927 was 250 inches. This station is however very exceptional, as the mean for other hill stations of approximately the same altitude is: Fraser's Hill (4,289 feet) 119 inches, Cameron's Highlands (4,650 feet) 122 inches.

The district of Jelebu, which is shielded from the influence of both North-East and South-West Monsoons, is by far the driest and has an average rainfall in the years 1891-1927 of 64 inches.

On the West Coast of the Peninsula the coastal stations are the driest, the average rainfall being about 84 inches. This gradually increases landwards, and the stations close to the foot of the main range of mountains show an average fall of about 115 inches. The opposite is true of the eastern side of the Peninsula where the coast stations show a mean of about 122 inches, due entirely to the heavy falls experienced during North-East Monsoon; and the inland stations show a mean of about 94 inches.

Negri Sembilan, owing to the absence of high mountains, has the lowest rainfall of the States of the Federation, the average of the seven stations being only 80 inches.

The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100 has never been recorded in the shade. The nights are cool. On the highest mountains the temperature has been known to fall at night to 42° Fahrenheit.

In the day time, there is almost always a breeze to modify the heat. The Peninsula lies within the region of the South-West and North-East Monsoons, but, owing to the barrier provided by Sumatra, the only really strong wind is the North-East Monsoon, which strikes the East Coast from across the China Sea. Violent squalls, known as "Sumatras", are not infrequent on the West Coast of the Peninsula between April and September. Generally they are of short duration, occur during the night, and may be accompanied by severe thunderstorms.

#### HILL STATIONS.

##### CAMERON'S HIGHLANDS.

The development of Cameron's Highlands as a hill station was definitely commenced. The construction of the road from Tapah was continued and opened to the 15th mile and plans were prepared for the remainder of the road.

The Committee appointed for the development of the Highlands met on four occasions.

Mules were imported from Burma in November for the purposes of transport.

A Company of the Burma Rifles was detailed for clearing operations and altogether cleared about 100 acres of jungle.

Transport to the Highlands to facilitate construction is provided by a contract with a local contractor and the strictest medical supervision prevails over the labour force engaged upon road-making operations.

The telephone was extended to the 19th mile and agricultural experiments were in hand at Tana Rata.

A contract, to be completed in three years, was let to a European firm in Singapore for the construction of the road from the 15th mile at schedule rates.

##### FRASER'S HILL.

The road to Fraser's Hill from the Gap was commenced in the year 1920 and completed in 1922.

The Government has, at present, at this station 14 bungalows which are intended primarily for the use of Government officers but which are available for others if there is a vacancy.

Two additional Government bungalows are to be constructed, but generally speaking further building must be left to private enterprise.

From Red Cross funds four houses have been completed and are in occupation. Two are primarily for the use of ex-service men and women, and for the others applications supported by medical certificates receive priority.

Ten private houses have been completed and work is in hand on three other buildings.

Six sites were allotted to applicants during the year.

The water supply system is completed, with the exception of certain treatment works, and sanitary installations have been constructed at a number of the bungalows.

The golf links was opened in 1927.

#### GUNONG ANGSI.

This is a small hill station containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

#### GUNONG TAHAN.

The establishment of a hill station at Gunong Tahan was first considered in 1912, and Sir Arthur Young, then High Commissioner for the Malay States, led an expedition to the mountain, with a view to investigating its possibilities. As a result of this visit, a topographical survey was carried out in 1913, and surveys were made for a road and railway connection. The length of the line from the junction of the Pahang-Kelantan line was approximately 30 miles, of which 20 miles were to be constructed as an ordinary railway, and 10 miles as a rack railway. The outbreak of the war prevented further progress with the scheme. Meteorological observations were taken from July, 1921, to July, 1923. The rainfall for the first year was 137.78 inches, and for the second year 161.69 inches. The wettest month was January, 1923, with 29 inches, and the driest was February, 1923, with 2.43 inches. The highest maximum temperature recorded was 76°F. on three occasions, and the lowest minimum temperature 48°F. There appears to be no record of investigations into the area available for the residential purposes or for cultivation. When the revised programme of works in connection with the Loan Account was prepared in 1921, the provision for the railway to Gunong Tahan was omitted, and the proposal for the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

### KLEDANG.

This hill is 2,646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path,  $4\frac{1}{2}$  miles long, leads to the bungalows.

### MAXWELL'S HILL.

Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) on the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" (the bungalow of the Chief Secretary to Government) and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,580 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

### PRINCIPAL LANGUAGES.

The principal languages spoken are English, Malay, Tamil and Chinese. The lingua franca is Malay.

### CURRENCY.

The unit of currency is the silver dollar which is divided into 100 cents. The value of the dollar is fixed at present at two shillings and four pence. Subsidiary silver coins are those of value 50 cents, 20 cents, 10 cents and 5 cents. There is also a nickel 5-cent coin and copper or mixed metal coins of 1 cent denomination.

### WEIGHTS AND MEASURES.

English, Malay and Chinese weights and measures are used. A pikul (equivalent to  $133\frac{1}{2}$  lbs.) is sub-divided in 100 katties of 16 tahils each. A koyan consists of 40 pikuls and is equivalent to  $5,333\frac{1}{2}$  lbs. avoirdupois. A gantang is the equivalent of one gallon and a chupak is equal to a quart.

Chinese equivalents to a tahl, a kati, a pikul and a koyan are a leong, a kan, a tam and si sap tam, respectively. Chinese equivalents to a chupak and a gantang are a chup put and a tang, respectively.



## ANNUAL REPORT, 1927.

## I.—GENERAL.

Constitutional  
changes.

A most important change was made in the constitution of the Federation. On the 24th April, 1927, an Agreement for the re-constitution of the Federal Council was entered into between the High Commissioner on behalf of the Government of His Majesty the King, Emperor of India, and the Rulers of the Federated Malay States. The most important effect of this Agreement was the voluntary withdrawal from the Federal Council of Their Highnesses the Rulers. Their Highnesses had long felt the existing situation to be in many respects unsatisfactory and their position in the Council somewhat anomalous. They were in entire and unanimous agreement with the change. As His Highness the Sultan of Perak himself stated in Council, it was felt that the step taken would lead to closer co-operation between the Rulers and their Residents and to a further measure of responsibility for the State Councils.

It was decided to hold a Durbar at least once a year in one or other of the States for the purpose of discussing matters of interest, more especially those of interest to the Malays. The Durbar proceedings will usually be held "in camera" and will be attended only by the High Commissioner, the Rulers, the Chief Secretary and the Residents. The first Durbar was held at Kuala Kangsar in August, when useful discussions took place.

The Agreement provided for the appointment to the Federal Council of three additional Malay Unofficial Members and of the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, together with one other official to be appointed by name and not by office.

A further important change provided for by the Agreement was the devolution to the State Councils of certain financial powers, whilst reserving to the Federal Council ultimate control of the financial resources of the Federation. Certain services described as "Reserved (State) Services" were placed

under the control of the State Councils subject to the voting of certain lump sums by the Federal Council to cover the total amounts required by the respective States. Within the limits of such total votes the State Councils will have control over such reserved services. There are services specially and definitely reserved as Federal Services but between these two categories come certain services described as "Unreserved" which are partly Federal and partly State. If the system now adopted proves a success, and the control by the State Councils is found to be satisfactory, it is proposed gradually to transfer in part some of these Unreserved Services to the Reserved (State) Services.

These proposals were passed unanimously in Federal Council, Their Highnesses the Rulers being then present as Members. They constitute a substantial measure of constitutional reform which, it is believed, will make for more efficient administration and will, at the same time, go far to satisfy the legitimate aspirations of the Rulers.

The effects of the abnormal floods referred to in the Floods. Annual Report for the year 1926 were very considerable, and the restoration necessitated thereby involved a large expenditure of time and money, especially by the Railway and the Public Works Departments. The question of relief was a very important one, and a special Commissioner—a member of the Malayan Civil Service—was appointed to go through the affected districts in Pahang with a view to organising the necessary relief out of the funds which were publicly subscribed, as well as the additional relief which Government readily gave. The loss of live stock, including buffaloes, was very considerable, and has as yet only partially been made good. The damage to the land, while very serious, proved to be rather less than was anticipated.

The States affected owe a large debt of gratitude to those who subscribed so generously to the public relief funds, to the Colony who helped so readily during the time of stress, and to the State of Kedah which made a present of buffaloes to the value of \$10,000 to replace some of those destroyed in Pahang. This readiness on the part of the various administrations and communities to render assistance in time of trouble affords remarkable evidence of the harmonious relations which exist in Malaya.

The effects of these floods further impressed on Government the necessity of taking early action with regard to the restoration and improvement of the rivers. A scheme was drawn up and received the general approval of the Federal Council. Representations, however, were made that considerable economy might be effected and great benefits secured both to the Government and the miners if a scheme could be evolved under which selected new river beds could be dredged for tin by the miners themselves and then taken over by Government to provide for the diversion of existing rivers. The old river beds could then be handed over for mining. A Commission was appointed in November to consider this question and make recommendations. Its deliberations had not been completed at the close of the year.

## II.—FINANCE.

Budget for 1927.

The estimates of revenue and expenditure for the year 1927 provided for a revenue of \$97,809,548, and an expenditure (excluding Railway capital expenditure and other expenditure on public works provided for out of loan moneys) of \$94,079,390.

Actual revenue  
and expenditure.

The actual revenue for the year was \$105,404,458 and the expenditure was \$93,263,915. Thus the surplus was \$12,140,543 against an estimated surplus of \$8,730,153.

The principal excesses in revenue as compared with the estimate were:

\$2,055,515	under Railways;
1,328,576	„ Customs;
1,311,089	„ Fees of Court;
1,083,773	„ Land Sales;
819,772	„ Interest;
615,440	„ Licences;
349,003	„ Forests;
303,430	„ Municipal.

The Excise revenue was short of the estimate by \$936,662.

The total gross savings in expenditure amounted to \$5,760,114, the largest items being:

Public Works Extraordinary ... ..	\$2,613,616
Public Debt Charges ... ..	1,143,898
Education ... ..	485,102
Surveys ... ..	223,140
Police ... ..	168,445
Medical ... ..	164,503
Civil Service ... ..	154,488
Agricultural ... ..	111,842
Clerical Service ... ..	111,566

The apparent reduction under Public Debt Charges is merely due to the non-investment of the Supplementary Sinking Fund contribution of \$1,143,858 until January, 1928.

Excesses over estimated expenditure totalled \$4,944,639, the largest items being:

Railways (Revenue Account) ... ..	\$2,379,247
Miscellaneous Services ... ..	1,532,089
Purchase of Land ... ..	462,469
Military ... ..	317,844

The excess under the head of Miscellaneous Services included \$645,863 for the purchase and equipment of premises in London for the Malay States Information Agency, a contribution to the Rubber Growers' Association of \$347,659 for propaganda and \$148,118 for relief and compensation in connection with the floods at the end of 1926.

The excess under Railways (Revenue Account) was caused by the transfer of the sum of \$3,606,012 to a Railway Renewals Reserve, while that under the head of Military was due to payment to India in 1927 of arrears of charges dating back to 1922 on account of the Training Battalion of the Burma Rifles.

The public debt remained as on the 31st December, 1926, viz., \$80,185,714, and consists of the Straits Settlements Sterling Loan of £9,335,000. The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) was issued in May, 1922, at 95, bearing interest at 4½ per cent. Public debt.

The Sinking Funds, contributions to which commenced in 1925, amounted to \$5,126,923 (exclusive of the sum of \$1,143,858 due but not paid until 1928).

	\$	c.		\$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (a) ...	11,015,080	19	Cash in Treasuries and Banks as per distribution statement ...	9,610,223	05
Sundry Outstanding Accounts ...	26,424	12	Cash with Agencies—		
Due to India ...	157,409	18	Crown Agents ...	\$ 25,489.07	
Ceylon Agency Account ...	29,780	76	F.M.S. & S.S. Joint a/c, India ...	34,343.07	
Family Remittances ...	5,644	41	Malay States Information Agency ...	24,059.87	
Straits Settlements Government			Penang Agency ...	39,777.17	
War Service Land Grant Scheme ...	5,795	50	Singapore Agency ...	497,505.09	
Deposits—				621,174	67
Courts ...	\$217,177.79		Cash in Transit ...	615,080	95
Forests ...	315,006.53		Fixed Deposits ...	14,750,000	00
Lands ...	1,067,960.26		Advances at call and other temporary investments by Crown Agents ...	17,511,485	53
Postal ...	280,204.83		Investments (Surplus Funds)—		
Miscellaneous ...	3,100,950.06		S.S. Municipal Debentures (at cost) \$	7,100.00	
	4,971,310	47	Sterling Securities ...	24,128,295.94	
Railway Renewals Reserve ...	3,806,011	96	Perak River Hydro-Electric Power Co. Ltd. ...	3,000,000.00	
Sundry Funds—				27,135,395.94	
Bailey Fund \$ 900.00			Less Redemption Reserve ...	26,702.96	
Police Fine and Reward Fund 28,908.61				27,108,692	98
Public Officers' Guarantee Fund 250,762.35			Investments—Singapore Naval Base Contribution Account ...	11,245,714	28
Red Cross Fund ... 3,330.73			Investments—Opium Revenue—Replacement Reserve Fund ...	15,061,498	01
Victoria Institution Building Fund ... 95,709.91			Investments (Specific Funds) (at cost)—		
Composition Stamp Duty Fund ... 295,625.65			Bailey Fund ...	\$ 900.00	
Miscellaneous ... 36,714.68			Police Fine and Reward Fund ...	25,404.75	
	711,941	93	Public Officers' Guarantee Fund ...	208,374.77	
War Savings Certificates, 1924-1927 ...	340	00	V. I. Building Fund ...	94,909.91	
Singapore Naval Base Contribution Account ...	11,245,714	28	Security Deposits Account ...	50,991.18	
Opium Revenue—Replacement Reserve Fund ...	15,503,998	01	Composition Stamp Duty Fund, 4 1/2 per cent. Loan with Crown Agents ...	295,625.65	
Inter-Treasury Accounts ...	513	43		676,108	76
Suspense ...	70,500	25	Family Remittances ...	1,086	90
Capital Fund—Bagan Serai Rice Mill ...	382,429	73	Due by other Governments—		
Capital Fund—Kuala Kurau Rice Mill ...	250,000	00	Ceylon ...	\$ 351.46	
Capital Fund—F. M. S. Government Factory ...	400,000	00	Crown Agents ...	1,424.77	
Surplus			India ...	15,140.96	
Reserved for Railway Capital Expenditure and Public Works Special Services ...	872,459,759.00		Johore ...	30,053.19	
Balance unallocated ...	23,768,884.93		Kedah ...	67.81	
	96,228,643	93	Kelantan ...	10,525.85	
			Singapore ...	21,862.40	
			Trengganu ...	6,346.97	
				84,533	61
			Sundry Outstanding Accounts	15,017	40
			Loans—		
			Siamese Government (b) ...	\$35,842,870.02	
			Brunei Government ...	407,040.00	
			Perlis Government ...	100,000.00	
			Planters ...	732,163.01	
			War Service Land Grant Scheme ...	2,028,798.00	
			Miscellaneous ...	1,529,458.51	
				40,679,991	54
			Advances ...	1,220,345	31
			Impruvts ...	168,337	65
			Bentong Tailings Retention Scheme ...	154,210	80
			Stores and Materials Account, railways ...	2,040,385	38
			" " " Post Office ...	1,332,447	68
			" " " P. W. D. ...	99,715	24
			" " " Electrical Board ...	104,987	89
			" " " Marine Slipway ...	45,409	43
			Marine Slipway Account ...	17,143	73
			Furniture making Account, Forest Department ...	4,912	19
			Timber Account—Forest Department ...	260,235	71
			Minor Forest Produce Account—Forest Department ...	12,632	36
			Suspense ...	46,914	96
			Bagan Serai Rice Mill ...	342,439	73
			Kuala Kurau Rice Mill ...	250,000	00
			F.M.S. Government Factory ...	400,000	00
				144,612,134	24

(a) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 (\$80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (vide Appendix B). The expenses of issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

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The Loan to the Siamese Government of £4,630,000 (\$39,685,714), which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at \$85,882,570 on the 31st December, 1927, having been reduced by the payment of the fourth instalment due on 1st January, 1927. As this loan is being repaid by equal yearly payments to include both principal and interest, the principal part of the instalments will steadily increase.

The Loan to Siam.

The loans to Perlis and Brunei, which stood at \$150,000 and \$410,500, respectively, on 31st December, 1926, have been reduced to \$100,000 and \$407,000, respectively, by the payment of the annual instalments due in 1927.

Loans to Perlis and Brunei.

The surplus on 31st December, 1926, was \$84,088,101. As the revenue for the year exceeded the expenditure by \$12,140,543, the surplus was increased to \$96,228,644 on 31st December, 1927, of which a sum of \$72,459,759 has been reserved for Railway capital expenditure and public works, leaving a balance of \$23,768,885 unallocated at the end of the year.

Surplus.

The liquid assets, comprising cash, advances at call, fixed deposits and easily realisable investments, amounted to \$67,216,609 at the end of the year as compared with \$60,272,171 at the beginning. This does not take into consideration the investments earmarked for certain specific funds.

To meet payments of the contribution of £2,000,000 towards the cost of the Singapore Naval Base, investments worth £2,000,000 were set aside in 1926 to form a special fund. Up to the 31st December, 1927, payments amounting in all to £688,000 had been made to the Admiralty, War Office and Air Ministry, leaving a balance on the fund of £1,312,000.

Singapore Naval Base.

The Opium Revenue Replacement Reserve Fund stood at \$15,503,998 on the 31st December, 1927, of which \$15,061,498 was represented by investments and the balance by cash awaiting investment. This fund was started with \$10,000,000, provided out of revenue in 1925 to which has been added 15 per cent. of the annual revenue from chandu sales together with the accumulated interest. The contribution from 1927 revenue was \$2,242,500.

Opium Revenue Replacement Reserve Fund.

A Railway Renewals Reserve Fund has been started for the purpose of meeting the depreciation of wasting assets belonging to the Railway Department and for equalising the

Railway Renewals Reserve Fund.

incidence of the cost of their replacement. The fund was opened by the transfer of the surplus amounting to \$3,606,012 of Railway revenue over revenue expenditure during 1927.

Sterling loan  
capital  
account.

A statement of the sterling loan capital account is published as appendix B to this report. Of the total proceeds of the two instalments amounting to \$74,297,549, expenditure on railway and other works up to the 31st December, 1927, accounted for \$63,281,859, leaving a balance of \$11,015,690 still available to meet capital expenditure during 1928.

### III.—PRODUCTION.

#### AGRICULTURE.

The higher establishment of the Department of Agriculture, excluding the Secretary for Agriculture who is not a technical officer, comprises 38 European officers, 26 on the Research Staff and 12 on the Field Staff, the latter including three officers in the Colony and one in Johore. Three new officers appointed during the year brought the Field Staff to full strength, though it still includes one temporary officer. The substantive appointments of two Assistant Entomologists, one Superintendent of Government Plantations and one Research Student were not filled during the year.

Rubber.

*General.*—As was anticipated in the report for 1926, most of the work connected with rubber was transferred from the Department of Agriculture to the Rubber Research Institute. It was, however, decided that the Field Division of the department should retain all legal powers under the Agricultural Pests Enactment and, in consequence, should remain responsible for ensuring the control of pests and diseases of rubber.

*Rubber Research Work.*—There were, however, two minor exceptions to this policy. In the first half of the year some outstanding chemical investigations on Hevea latex were brought to a stage at which the results then obtained could be published. Moreover, the Mycological Division continued a general study, which has been in progress for some time, of certain Malayan species of the genera *Pythium* and *Phytophthora*, in order to determine their relationships to the similar species responsible for well-known diseases of major crops throughout the tropics. This work necessarily includes an investigation of certain species of these fungi responsible for such well-known diseases of Hevea as black stripe, patch canker, pod rot and leaf-fall.

*Diseases.*—The severe floods at the end of 1926 and the beginning of 1927 were directly responsible for the destruction of a number of rubber trees along the river banks and in low-lying situations. They also rendered many others susceptible to the attacks of such diseases as "Dry Rot" and "Patch Canker", since the fungi causing them readily penetrated into bark already damaged by being submerged for several days.

"Pink Disease" (*Corticium Salmonicolor*) was not much in evidence and was kept under adequate control in those areas where it is endemic. Certain virulent outbreaks of "Mouldy Rot" (*Sphaeronema fimbriatum*) during wet weather required close attention to ensure adequate treatment. This disease spread in a few localities, but on the whole there has been no great increase in the area affected.

*General.*—Owing to extensive damage by floods, combined Padi. with the loss of grain occasioned by a wet harvest in the Krian irrigation area, the padi crop reaped in 1927 was small. Only 68 per cent. of an average crop was obtained in Krian, while the total crop in the Federated States was estimated at about 21½ million gantangs from approximately 160,000 acres. On account of this shortage of crop, a good price was obtained for such local supplies of padi as were available.

So completely were the crops destroyed by floods in some localities that it became necessary to distribute over 95,000 gantangs of seed padi for the 1927-28 season, the greater part of the supply being required along the Pahang and Perak rivers. Later in the year drought delayed planting in many districts, and in consequence crop prospects vary greatly. On the whole, however, if the weather is dry during harvest, an average crop is expected. It is interesting to record that the detritus deposited by the floods in Pahang proved very suitable for the growth of wet padi and led to yields much in excess of the average in several localities.

*Experimental Investigations.*—Unfortunately the conditions prevailing during the 1926-27 season seriously interrupted the records of all padi experiments in progress. The growing plants were entirely destroyed at the Talang, Bota and Dong Test Stations and those at the Kajang Station were severely damaged, while such data as it was possible to obtain at the Titi Serong Padi Experiment Station were of little value for computing results.



Further evidence of the wide distribution of seed of selected strains was gained by visits to several padi areas during and after harvest, and by examining exhibits at various Agricultural Shows, at which it was observed that the selected strains took numerous prizes.

In view of the reliance of Malaya on imported supplies of rice it is desirable to obtain information on the possibilities of storing rice and padi, in order to tide over any temporary embarrassment. For this purpose an experimental rice store has been erected and experiments will be commenced in the coming year.

*Pests.*—The rat campaign was continued in Krian throughout 1927. As a result 842,791 rats were destroyed as compared with 673,102 in the previous year. In early December some damage from these pests was found and in consequence balls of poisoned bait were prepared and distributed at the rate of 1,000 balls a day. This effectively checked any further damage.

The Delphacid insect (*Sogata pallescens*) which did considerable damage to padi in 1925, again appeared in various places in December, but disappeared after two weeks. In Krian it was successfully controlled by draining off the irrigation water and replacing it with fresh water. The effect of this pest on the crop is likely to be slight, as the padi was attacked when young and had sufficient time to recover before harvest.

Oocoonuts.

*General.*—During January the Singapore price for copra rose from \$10.10 to \$11.00 per picul. It subsequently varied little until October, when it rose to \$11.53 per picul, declining again at the end of the year to \$11.50 per picul. The average price throughout the year was \$11.17 as compared with \$11.80 per picul in 1926.

The feature of the year has been the marked decrease in copra production. It is considered probable that the drought in 1926 accounts for this. In general the copra content of nuts has been low, while in particular districts fewer nuts have been harvested.

*Experimental Investigations.*—Continued studies show that individual palms vary widely from one another not only in their average annual yields of nuts, but also in the average copra content of those nuts. Thus annual yield and average copra content of nuts have both to be ascertained in order to select the individual palms giving the highest annual production of copra. These results emphasise the utility at the present

time of selecting seed nuts from palms known to give high yields of copra, and also indicate the valuable increase in copra production per acre that may ultimately be obtained by selection.

The Coconut Experiment Station, Klang, is now fully planted with selected types of trees. A series of experiments on manuring, cultivation and the use of cover and catch crops has been commenced.

The reputed inferiority of Straits copra as compared with that produced in Malabar or Ceylon is being made the subject of a chemical investigation. It is believed that climatic conditions are not wholly responsible and it is hoped that an improved reputation may eventually be established.

*Diseases and Pests.*—The Black Coconut Beetle (*Oryctes rhinoceros*) and the Red Stripe Weevil (*Rhyncophorus schach*) have been kept well under control. A few fresh cases of Salmon Pink Disease occurred in the coastal districts, but no large areas were affected in any one place. Further work, undertaken with the object of ascertaining the cause or causes of the symptoms at present grouped under this name, has not yet led to any definite conclusions.

*Oil Palms.*—While there was no sensational development of this new industry during the year, the planting and general development of estates proceeded unchecked. The total area alienated for this cultivation in Malaya amounts to nearly 37,000 acres, of which 18,321 acres have been planted. Four estates are now equipped with up-to-date machinery for extracting oil and kernels. Other crops.

The exports for 1927 were 915 tons of oil and 185 tons of kernels. The average price of African oil has been about £36 per ton and that of kernels about £20 per ton. The Malayan oil realised better prices than those quoted for supplies from Africa.

All the local information at present available concerning this crop was published towards the end of the year in a special number of the *Malayan Agricultural Journal* entitled "The Oil Palm in Malaya".

A preliminary survey of the various types of oil palm growing at the Experimental Plantation, Serdang, indicates that the range of variation in this crop is sufficient to render profitable the selection of the best type of palm for plantation purposes.

The development of the oil palm industry has given rise to a number of problems, some connected with the cultivation of the palm itself and others with the efficient production of a high grade oil in the factory. Certain of these problems have already been solved, while a number of others are being carefully investigated.

*Pineapples.*—Interest in this crop appears to be well maintained. Exports of canned fruit from Malaya amounted to approximately 40,000 tons valued at  $8\frac{1}{2}$  million dollars. Johore remains the principal centre of this industry, but the factory at Klang obtained its supply of fruit locally in Selangor.

The market experienced many vicissitudes during the year. At one time there was an accumulation of stocks, but sales increased in the later months, thereby easing the situation.

Chemical investigations have shown that alcohol, or concentrated syrup, in addition to a cattle feed, or manure, can be prepared from the parings which at present accumulate in refuse heaps and become a source of danger as breeding grounds for insect pests.

*Nipah.*—The palms on the two existing estates continued to make satisfactory progress and the planted area was increased.

The investigations on the production of alcohol from nipah palms were concluded and the published results show that an annual yield of 1,200 gallons of alcohol per acre may reasonably be expected.

Apart from the production of power alcohol, this palm has potentialities as a source of acetic acid.

*Tuba Root (Derris spp.).*—The utilisation of tuba root in the preparation of an insecticide is engaging the attention of investigators in various countries. Locally the Department of Agriculture is studying the insecticidal value of different varieties grown at Serdang. It is hoped that these investigations will eventually widen the market for this product.

The area planted with tuba in Malaya now exceeds 2,000 acres.

*Coffee.*—There has been an increase in the area planted with coffee during the year, but a very considerable further increase is necessary to supply the local market which absorbed net imports valued at over  $2\frac{1}{2}$  million dollars.

In addition to the local market, there would appear to be good prospects of business with other countries, particularly Australia where coffee imported from British territories has recently been granted the advantage of a preferential tariff.

*Tea.*—Some interest has been shown in the possibility of developing the local cultivation of tea. Certain imported varieties are growing well at Serdang and on Cameron's Highlands.

One lowland estate is exporting to England the produce of a comparatively small area.

Both a local and an external market await growers in Malaya, if they can produce teas of the grades desired.

*Areca Nuts.*—A decline in production during the year was accompanied by a local fall in price, since the heavy rains at the end of 1926 and the beginning of 1927 adversely affected both the quantity and the quality of the local product.

Yields of individual palms have been recorded at Serdang and young palms of twenty different types have made good growth at the Coconut Experiment Station, Klang. Thus, a basis for selection work is being established.

*Bananas.*—The local demand would appear to justify some extension of the area planted with this crop.

Malaya, Siam and Burma are thought by many to be the original home of the banana and are rich in local varieties. The Department of Agriculture is co-operating with the Royal Botanic Gardens, Kew, and the Imperial College of Tropical Agriculture, Trinidad, in an attempt to produce a banana with good market qualities resistant to the destructive Panama Disease.

*Sisal Hemp.*—The possibility of the commercial production of Sisal hemp locally has attracted attention during the year.

*Pepper.*—The shortage of supplies, resulting in the present high price, appears worthy of the attention of those having some knowledge of pepper cultivation.

*Government Experimental Plantation.*—Various minor food crops and vegetables have received attention at Serdang. Information concerning these has been published as it became available and planting material has been distributed.

With the objects of planting up an orchard and satisfying the local demand for planting material, a fruit nursery was fully stocked early in the year.

Further supplies of seed of the trees yielding chaulmoogra oil have been obtained for the purpose of extending the planted area.

Experiments with tapioca have been continued and chemical analyses have been made to determine the quantities of food constituents removed from the soil by these plants under different methods of treatment. The chemical work has led to an investigation of the efficiency of methods available for sampling a standing crop.

Considerable progress has been made in establishing a stock farm at Serdang with the object of carrying out experiments on the breeding of milch cattle. Thirteen head of cattle have all thrived well and have been fed entirely on locally grown food-stuffs.

The preliminary results obtained with various fodder and grazing grasses have been satisfactory.

Steady progress has been made on the experimental area at Cameron's Highlands. Upland crops such as tea, cinchona, cardamoms and coffee are being established. Attention is also being given to the cultivation of sub-tropical fruits, vegetables and ornamental plants.

The creation of a composite Division of Soils and Plant Physiology enabled the Department of Agriculture to commence work on a definite programme of soil investigations.

The most urgent problem is the establishment of soil types on a geological basis. For this purpose a soil survey was commenced in a limited and accessible area including all the important geological formations on the west side of the Peninsula.

At the end of the year a fairly complete idea of the distribution of the upland, as opposed to the coastal, types of soil in the area chosen had been obtained.

A comprehensive survey of padi soils was also commenced with a view to ascertaining the soil factors affecting fertility.

No correlations have yet been established between yield and any soil factor, but one observation of importance which has emerged is that the presence of a medium, or even high, percentage of sand does not necessarily result in low yield. Consequently great caution must be used in condemning any proposed padi area on the score of a high sand/clay ratio.

Cameron's  
Highlands.

Soils.

A satisfactory method of coagulating jelutong latex by boiling has now been worked out and is being adopted by Chinese producers. Jelutong prepared in this way commands a premium on the market.

Chemical  
investigations.

Of the two kinds of deterioration common to native jelutong the development of blackening has been overcome and the cause of resinification and granulation is being studied.

An investigation has been commenced of the efficiency of the local methods of distilling alcohol from rice. The results so far obtained disclose a considerable waste of rice, in consequence of which the possibility of introducing improved methods of distillation will be examined.

The Malayan Agri-Horticultural Association held its fifth Annual Exhibition at Kuala Lumpur from July 29th to August 1st. Under the auspices of this Association District Shows were also held at five centres in the Federated Malay States.

Agricultural  
Shows.

The report of the Committee appointed to submit proposals for a School of Agriculture was approved in principle. A site adjoining the Experimental Plantation at Serdang was selected and cleared.

School of  
Agriculture.

An Advisory Committee for the School, appointed towards the end of the year, submitted preliminary plans and estimates for the lay-out and buildings. These are receiving the consideration of Government.

There is no doubt that such a school is an urgent necessity in Malaya.

As soon as the floods began to subside in the valleys of the Perak, Pahang and Kuantan rivers, the Department of Agriculture collected planting material of quick growing food crops and vegetables for distribution among the owners of small holdings in these areas. Much of this material was sent to Pahang where the Malays living along the river were most in need of it.

Restoration  
work in areas  
devastated by  
floods.

As the wide deposits of detritus along the banks of the Pahang river commenced to dry, it became possible to plant them with padi and for this purpose large quantities of seed were obtained and distributed.

In the last quarter of the year, after the work of planting up vegetables and padi for immediate food requirements had been completed, supplies of seed coconuts and young fruit trees were distributed in Pahang to replace some of those destroyed.

The Malays in Pahang worked well in face of serious odds and the recovery of the country along the river has been more rapid than could at first have been anticipated.

Export of  
rubber.

The rubber exported from the Federated Malay States during 1927 was 127,802 tons, including 1,560,976 gallons of latex, as compared with 160,213 tons and 2,059,655 gallons in the preceding year.

Restriction.

The Rubber (Restriction) Enactment remained in force throughout the year. At the beginning of 1927 the percentage of release was 80 per cent. In accordance with the restriction scheme the percentage was reduced to 70 per cent. on the 1st February, 1927, and to 60 per cent. on the 1st of May, 1927. It remained at 60 per cent. throughout the remainder of the year.

The unused balance of Federated Malay States export rights carried forward on 31st October, 1927, was only 5,167 tons as compared with 12,064 tons on 31st October, 1926. As this figure 5,167 tons includes the whole of the dealers' couponed stocks in the Federated Malay States amounting to about 4,000 tons, it will be seen that the amount of unused rights in the hands of producers was almost negligible.

Standard  
production.

The standard production of the Federated Malay States for the fifth restriction year, which ended on 31st October, 1927, was 190,391 tons.

An amendment was made in the Rubber Restriction Enactment rules with effect from 1st November by which the standard of tapping taken as the basis of assessment was altered from one cut daily on a quarter of the circumference of the tree to one cut every third day on half the circumference of the tree and assessments for the sixth restriction year were made on this basis. This amendment led to considerable controversy and probably to an increase in the number of opponents to the restriction scheme.

#### FORESTRY.

General.

The year was one of all round progress. The surplus of revenue over expenditure was the highest on record, and schemes of development connected with the exploitation of the forests, and with research and education are gradually being brought into force.

Staff.

At the beginning of the year there were 33 officers on the senior staff of the Malayan Forest Service in addition to the Controller of Timber Supplies and the Timber Accountant. Two of these were on deputation in Johore and one in Kedah, and

one was for a few months on special duty in Trengganu. One Assistant Conservator and a Logging Engineer were appointed during the year, and at the end of the year three probationers were under training at Oxford, and a Chemist (to be attached to the Agricultural Department for work on forest products) was temporarily attached to the Imperial Institute prior to taking up his appointment.

The strength of the locally recruited English-speaking staff at the beginning of the year was 17, of whom one was on service in Johore and one under training in Burma.

The sanctioned strength of the subordinate staff was 497, exclusive of clerks, boatmen, and the permanent labour force.

At the end of the year there were 5,467 square miles of reserved forest, and 1,233 square miles notified as proposed reserves. The State land forests in the more highly developed parts of the country are now almost exhausted, and each year more and more reliance has to be placed upon the reserves. Where the demand for firewood is large the inferior species can be removed at a profit with great silvicultural advantage: where there is little or no demand it will be necessary to pay for their removal in order to make certain of an adequate supply of the valuable hardwood and money is being provided for the purpose.

Reserved  
forests.

Labour conditions improved during the year, but not soon enough to enable the department to supply the railway with its full quota of sleepers without unduly raising the price of other classes of timber. Large numbers of sleepers had therefore to be imported from Australia. At the end of the year, thanks partly to the prohibition of export of the most durable hardwoods, the situation was very much easier; sleepers were coming in freely, and the stocks of timber in the hands of dealers were probably larger than they had ever been before. The improved labour conditions resulting from the fall in the price of rubber also enabled the department to recruit a fairly adequate Malay labour force for urgent silvicultural work.

Labour and  
supplies.

The Timber Industries Committee continued its sittings throughout the year. The experimental wood-preservation plant, which was installed on its recommendation, was brought into use at the end of August, and by the end of the year had yielded information which in the opinion of the Committee justified the purchase of a commercial plant to be installed in conjunction with a modern sawmill in the Palong Reserve, where large-scale experiments in the extraction of timber with modern mechanical appliances are already being

Timber  
Industries.



carried out under the supervision of the newly appointed Logging Engineer. It is particularly satisfactory to be able to record that local Malays are proving apt pupils, and are rapidly becoming proficient in the use of modern tools and machinery.

#### Output.

The output of timber, firewood and charcoal on which payment was made was 906,468 tons compared with 877,137 tons in 1925. A fall in the output of firewood, due to the extended use of charcoal and oil, was more than counterbalanced by a rise in the output of timber. Increasing interest is being shown in the manufacture of charcoal, which is still imported in large quantities. There was an increased output of *damar*, *jelutong*, and canes. The gutta-percha market was fairly steady throughout the year, and then collapsed just when tappers had been secured; it cannot now be tapped at a profit, and it is doubtful whether the market will ever recover its former strength owing to the advantages possessed by wireless telegraphy over telegraphy by submarine cables which consume most of the gutta-percha produced.

#### Forest Research Institute.

Plans for the proposed Forest Research Institute at Kepong were prepared and passed, and tenders were called for after the close of the year. A vernacular forest school for twelve students has been established, and the first course was begun in September under the direction of an Assistant Conservator.

#### Chemical investigations.

Further problems connected with *damar penak*, *jelutong*, dragon's blood, gum benjamin, tannin, and *terap* bark were investigated by the Chemists of the Agricultural Department and the Institute for Medical Research. The process for the coagulation of *jelutong*, which was described as satisfactory last year, was improved upon to such an extent that it can now be brought about within a few minutes, as compared with the three or four days required by the old method. Dragon's blood was purified and produced in a form which may considerably enhance its value. A thorough investigation of the tannin content of the bark of the common mangrove species was started, but is expected to take some months to complete.

#### Industries.

A new industry, namely, the manufacture of veneers and plywood, was started at a factory at Rantau Panjang on the site formerly occupied by Malayan Matches Ltd. The company expected to start producing early in 1928. The wood distillation plant at Krambit, which suffered so severely from flood damage and isolation, was again working in July, and continued for the rest of the year, though not at full pressure.

Dr. Foxworthy's "Commercial Timber Trees of the Malay Peninsula" appeared in October as Malayan Forest Record No. 3, and received appreciative reviews. It is generally recognised that this work has set a very high standard in its class, both as regards the manner of its presentation and the quality of its production. Messrs. Blair and Byron summarised the results of their own and other Chemists' investigations, and published "Notes on *Damar Penak*" as No. 4 of the same series. Mr. Watson's list of vernacular and botanical plant names was completed and given to the printer as No. 5, whilst good progress was made with No. 6, which is intended to deal with the mangrove swamps in some detail.

### MINING.

The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 52,179 tons compared with 45,947 tons in 1926 and 45,926 tons in 1925. The export of tin-ore represents about 92.7 per cent. of the total. It is interesting to observe that the 1927 exports were the highest ever recorded from the Federated Malay States. The export duty (in millions of dollars) was \$17.4 in 1927, \$15.6 in 1926 and \$14.00 in 1925.

The price of tin at the beginning of the year was \$151.75 per pikul, and by the beginning of March had improved to \$159 per pikul which was the highest price quoted for the year. Thereafter a fluctuating downward movement set in culminating on November 11th when the lowest price recorded for the year was reached, viz., \$127.37½ per pikul. The year closed with the price standing at \$131 per pikul. The average price for the year was \$144.93, which was .34 cents higher than the average price for 1926.

The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

Heading.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
	\$	\$	\$	\$	\$	\$	\$
Highest ...	*115.00	93.62	121.00	148.00	145.50	157.50	159.00
Average ...	85.04	80.64	101.75	124.19	131.77½	144.59	144.93
Lowest ...	72.00	71.75	88.50	100.75	116.00	131.75	127.37

\* Government purchase price.

**Labour**

The labour force engaged in mining (including dulang pass holders) was 130,424 at the end of the year. The figures for the preceding three years were: in 1926, 116,216; in 1925, 115,049; in 1924, 114,273. The total does not include labour employed on the extraction and transport of firewood.

Generally there was no shortage of labour during the year but the large programme of dredge construction has caused a scarcity of fitters.

**Tungsten.**

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows for this and the previous year:

				Wolfram.		Scheelite.
1927	...	...	...	20.00 tons	...	Nil
1926	...	...	...	49.40	,,	40.18 tons

**Gold.**

The production of gold from the Raub Gold Mines was 9,919 ounces as compared with 12,981 ounces in 1926. In addition alluvial gold was recovered in various places to the extent of 1,839 ounces.

**Coal.**

The production of coal from the Malayan Collieries Ltd., Selangor, was 449,580 tons, a decrease in production of 6,942 tons on the previous year. Consumption was as follows:

Federated Malay States Railways	...	...	166,364 tons
Mines	...	...	238,869 ,,
Other Federated Malay States consumers	...	...	9,482 ,,
Exported	...	...	862 ,,
Consumed at the Collieries	...	...	34,003 ,,
			<hr/>
			449,580 ,,
			<hr/>

The Enggor Coal Syndicate Ltd., Perak, which reached the producing stage in the latter part of 1925, produced during 1927, 13,421 tons. The output was consumed as follows:

Federated Malay States Railways	...	...	10,497 tons
Mines	...	...	2,270 ,,
Consumed at the Colliery	...	...	654 ,,
			<hr/>
			13,421 ,,
			<hr/>

The demand and search for dredging land is as keen as ever but payable ground is becoming increasingly difficult to locate. At the end of 1927 the number of dredges at work was 70, the number under construction 21 and the number on order 23. There are two dredges under construction which have been designed to dig to a depth of 120 feet; the maximum depth obtained hitherto has been 85 feet.

Bucket  
dredging.

Mining by means of gravel pumps is still increasing in popularity and the number of such pumps in use at the end of 1927 was 645 as against 577 in 1926.

Gravel pumps.

The comparative immunity from thefts of ore enjoyed by the mining community for a considerable number of years past was unfortunately broken by a series of minor thefts which occurred in the Tronoh, Pusing, Papan area during the year. Eight cases, involving quantities of two to three pikuls of ore in each case, were reported. Apparently the same gang of thieves was responsible for all the thefts. It was ascertained that the stolen ore was subsequently sold by dulang women under the authority of their dulang passes. Steps were taken by the Mines Department to deal with the matter and a new rule under the Mineral Ores Enactment was passed which compels the ore-buyer to enter on a book attached to the dulang pass the date, weight and value of all ore sold by the holder of the pass.

Mineral Ores  
Enactment.

The very extensive floods that occurred at the end of 1926 did a great deal more damage to the Pahang Consolidated Mine than at first appeared. They did not start milling till April and consequently there was no output from the mine for the first three months of the year.

Floods.

Both Raub Australian Gold Mining Co. Ltd. and Rahman Hydraulic Tin Ltd. also suffered but the other mines escaped in a remarkable manner.

#### IV.—TRADE AND ECONOMICS.

The aggregate value of trade for the year 1927 was \$516,086,797, shewing a decrease of \$103,401,130 or 16.69 per cent. as compared with the record value of the year 1926. The chief items responsible for the decrease were rubber and copra. The floods at the beginning of the year adversely affected the export of copra, considerable damage being done to coconut areas in Perak and Pahang. Notwithstanding this decrease the general trade of the country must be considered satisfactory.

Trade.

The distribution per head of the population was \$843 as compared with \$442 in 1926.

The aggregate value of exports exceeded the value of imports by \$163,764,409 or nearly 93 per cent.

The total values of imports and exports for the last seven years are as follows:

	Imports.	Exports.	Trade balance in favour of exports.
	\$	\$	\$
1921 ...	103,012,606 ...	185,485,876 ...	82,472,770
1922 ...	78,822,849 ...	140,429,775 ...	61,607,426
1923 ...	89,088,237 ...	197,100,950 ...	108,012,713
1924 ...	97,436,302 ...	212,884,740 ...	115,448,438
1925 ...	137,116,207 ...	411,878,610 ...	274,762,403
1926 ...	173,887,724 ...	445,600,208 ...	271,712,479
1927 ...	176,161,194 ...	339,925,608 ...	163,764,409

Distribution of  
trade.

The percentage distribution of trade for the last five years is as follows:

#### IMPORTS.

—	1923.	1924.	1925.	1926.	1927.
Singapore ... ..	47.03	43.96	45.43	43.25	39.78
Penang ... ..	25.00	23.69	23.31	21.22	18.90
Malacca ... ..	.92	1.23	1.13	1.01	1.06
Unfederated Malay States	3.31	3.07	2.38	1.38	1.11
United Kingdom ...	9.78	11.08	12.00	13.35	15.53
British Possessions ...	4.91	7.47	5.47	5.95	5.78
Foreign countries ...	9.05	9.50	10.28	13.84	17.84
	100%	100%	100%	100%	100%

#### EXPORTS.

—	1923.	1924.	1925.	1926.	1927.
Singapore ... ..	29.09	29.50	22.00	22.56	22.61
Penang... ..	39.09	41.76	29.75	26.17	32.32
Malacca ... ..	3.82	2.84	3.30	2.89	2.58
Unfederated Malay States	.08	.30	.23	.26	.30
United Kingdom ...	13.61	9.87	15.47	18.62	18.22
British Possessions ...	.71	.80	.72	1.22	1.08
Foreign countries ...	13.60	14.93	28.53	28.28	22.89
	100%	100%	100%	100%	100%

The total revenue from Customs, Excise and the Chandu Monopoly amounted to \$58,240,779, being a decrease of \$682,389 on the revenue collected in the previous year mainly due to a slight falling off in receipts under Customs and Chandu. Excise revenue is small, as compared with figures for Customs and Chandu, but it is steadily on the increase, being \$2,621,069 in 1927 as compared with \$2,276,704 in 1926. Revenue from Customs, etc.

Import duties contributed \$8,947,779, being \$874,817 in excess of the import duties collected in 1926. Export duties totalled \$26,506,472, a decrease of \$546,789.

The nett revenue from the Chandu Monopoly was Opium. \$14,950,000 as compared with \$15,110,897 in 1926.

There was during the greater part of the year a marked Rubber. increase in rubber smuggling due to the reduction in the exportable allowance of rubber which varied from 80 per cent. in January to 60 per cent. in May. The Preventive Branch worked at high pressure to cope with organised bands of smugglers who, by changing their tactics and by continually shifting from one part of the coast to another, kept their pursuers busy.

It is satisfactory to note that there was a considerable diminution of this evil during the last few months of the year.

The following comparative table gives the number of seizures, convictions and fines imposed for the whole restriction area during 1926 and 1927:

No. of boats seized.			No. of persons convicted.			Fines imposed. \$
1926	...	58	...	130	...	544,521
1927	...	277	...	508	...	2,559,095

The Preventive Branch devoted considerable time to enforcing the provisions of the Rubber Supervision Enactment to prevent illicit dealings in rubber stored under conditions which appeared to indicate its early removal for smuggling. The following table shows the number of prosecutions under the Enactment:

	1926.			1927.		
Prosecutions	...	...	61	...	...	228
Convictions	...	...	56	...	...	194

## Shipping.

A satisfactory feature of the year under review is the continued increase in cargo handled at Port Swettenham. The number of ocean-going steamers, which called at Port Swettenham during the year, was 652 with a tonnage of 2,500,383 against 595 with a tonnage of 2,349,066 in 1926. The number of local steamers calling at the port was 842 with a total tonnage of 407,566 against 751 with a tonnage of 371,613 in the previous year. The number of ocean-going vessels, which came alongside the wharf, was 161 as against 21 in 1926. This expedited the delivery of cargo and relieved the congestion of lighters.

## COMPANIES.

During the year, 48 local companies with a total nominal capital of \$25,008,570 were incorporated and registered as compared with 56 companies (\$35,764,500) in 1926, 38 companies (\$19,285,166) in 1925, and 25 companies (\$12,324,763) in 1924.

The purposes of the new local companies were rubber planting (9), mining (9), mining and rubber planting (4), general trading (8), broking (6), engineering and contracting (2), oil palm extraction, theatre, hospital, motors, manufacturing of cement, manufacturing of bricks, dealing in phosphates, broadcasting service, dealing in timber and acting as trustee (one each).

The number of companies in liquidation in 1927 was five, while seven local companies were struck off the register as defunct.

There were 575 companies on the register at the end of the year.

## BANKRUPTCY.

During the year, 145 bankruptcy notices were issued, 57 bankruptcy petitions filed, 26 receiving orders and 25 adjudication orders made.

There was a decrease in the work as compared with the preceding year in Perak, while the work in Selangor showed a marked increase.

Seven compositions were approved by the Court.

There were three criminal proceedings in bankruptcy.

Eleven applications were made for discharge, of which seven were granted.

## CO-OPERATION.

The European staff of the department consisted of the **Staff.** Director and an Assistant Director. The Director was on leave during seven months of the year and during his absence the department was in charge of the Assistant Director, who had also to supervise the work in the Straits Settlements, Kedah and Perlis. An additional officer of the Malayan Civil Service was posted to the department at the end of October, 1927.

The Asiatic staff consisted of one Assistant Registrar, one Auditor and Accountant, one Senior Co-operative Officer, 13 Malay Co-operative Officers and one Indian Officer and six clerks. The department is finding constant difficulty in recruiting suitable Malay officers.

The expenditure, inclusive of the salaries of the **Expenditure.** European staff, was \$99,533. The ratio of cost of administration to the aggregate working capital of the societies showed a still further decrease from 8.75 per cent. in 1926 to 6.97 per cent. in the current year.

The feature of the year's work was consolidation rather **Progress.** than expansion.

The following table reveals the position on 30th June, 1927, which is the end of the co-operative financial year:

Year.	No. of societies.	No. of members.	Total working capital.	Paid up capital.	Reserves.
			\$	\$	\$
1923 ...	19	2,361	73,461	66,981	480
1924 ...	40	6,564	293,193	261,677	5,656
1925 ...	65	8,995	479,314	429,696	6,652
1926 ...	101	12,586	950,291	863,370	16,550
1927 ...	105	14,589	1,428,601	1,344,961	36,921

These figures represent entirely privately subscribed capital.

The only disquieting feature in the audit report is the growth of loans overdue. This is attributable in part to the comparative failure of the Krian padi crop and the fall in the price of rubber.

An Officer of the Agricultural Department was seconded to the department during the year. After an inspection of several rural credit societies mainly dependent on rubber, an exhaustive report was submitted which revealed the unsatisfactory position of most of the small holders of rubber. It is held that not only is

Co-operative  
rubber  
factories.



the peasant wasting his resources by inefficient methods but the lack of organised selling and poor methods of manufacture rob him of a large share of his potential profits. A successful co-operative rubber factory would probably not only reduce the cost of smoking and machining but secure an all round higher price by turning out better sheet. It is proposed to start six co-operative rubber factories as an experiment in the near future. If they prove successful, it is hoped that by these means it will be possible eventually to organise the mass of small holders, thereby greatly assisting the rubber industry generally.

Co-operation  
amongst the  
Chinese.

A sub-committee of the Co-operation Board recommended that work amongst the Chinese should be started as soon as possible.

Indian estate  
labourers  
societies.

A definite start was made with Indian estate labourers' societies. There were three societies with a membership of 511 and a paid-up capital of \$4,154 on the register on June 30th, 1927, and five more societies have since been registered. Inquiries from managers of estates from all parts of Malaya have been received and as soon as the necessary staff is trained a large extension of this work may be expected.

Co-operative  
Bank of  
Malaya.

A joint Committee representing the Planters' Loans Board and the Co-operation Board was appointed to consider the question of the establishment of a Co-operative Bank of Malaya. In view of the rapid increasing surplus assets of co-operative societies which now total \$426,904, and the need in this country for both agricultural and non-agricultural credit, the Committee recommended the formation of a Co-operative Bank which eventually would take over the functions of the Planters' Loans Board. The question was receiving the consideration of the Secretary of State at the close of the year.

#### V.—COMMUNICATIONS.

##### POSTS AND TELEGRAPHS.

Postal.

There are now 102 post offices and 58 places at which postal business is transacted by railway station masters and others. The estimated number of articles posted and delivered was over 36 millions.

Money orders.

Money orders numbering 339,631 were issued and paid, the total amount representing \$20,722,562, an increase of 17,964 in number and a decrease of \$1,880,788 in amount. Telegraph money orders numbering 13,391 for \$1,155,768 were issued and paid.

The number of Savings Bank depositors on the Savings Bank. 31st December, 1927, was 32,595, an increase of 2,792 during the year. The average amount standing to the credit of depositors decreased from \$121 to \$111. The excess of withdrawals over deposits during the year was \$78,110. The number of Malay depositors increased from 6,219 to 7,070.

The number of telegrams despatched and delivered was Telegraphs. 980,513, an increase of 5,475.

The total number of subscribers connected to the Telephones. telephone exchanges at the end of the year was 4,003, an increase of 553 compared with 1926. There were also 1,871 extension lines, extension bells and private lines, etc., maintained by the department, an increase of 273. On 31st December there were 2,802 miles of telegraph and telephone lines and 21,716 miles of overhead wires, of which 18,483 miles were telephone wires. In addition there were 102 miles of underground cable, the length of single line in the cable being 9,908 miles. These figures do not include railway wires nor the 123 miles of line (606 miles of wire) owned and maintained by the department in Johore. Four additional public telephone exchanges were opened during the year at Jelebu, Batang Berjuntai, Bentong and Menglembu. Many new trunk lines were established to connect these exchanges with the system and to meet increased traffic. The trunk telephone revenue was \$317,380 or over 14 per cent. greater than in 1926. The general telephone revenue was \$1,062,562, an increase of over 17 per cent. over the figures for 1926.

The Scheme for a Malayan Trunk Telephone Cable between Singapore and Penang was (after consideration by a Conference of Representatives of the Federated Malay States, Straits Settlements and Johore) abandoned mainly on financial grounds. Developments in wireless telephony and telegraphy have rendered doubtful the justification for embarking on expensive underground cable schemes. Malayan Trunk Telephone Scheme.

The nett revenue collected by the department was Financial. \$2,756,186, an increase of \$233,725. Annually recurrent expenditure amounted to \$2,058,140 and special expenditure (including loan account) to \$981,606. The value of the services performed free of charge for other Government departments, estimated at \$213,667 is not included in these figures, which also exclude temporary and acting allowances amounting to \$190,065.

## Wireless.

Two short-wave transmitting and receiving sets for the conduct of wireless experiments throughout the Peninsula were received in October but, owing to certain faults in the apparatus, they could not be brought into operation before the close of the year. On the results of these experiments, since inaugurated, must depend the wireless policy of the administration.

## RAILWAYS.

## General.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines: the West Coast line runs north-north-west through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour—about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier Station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, Kelantan. It is completed and opened for traffic as far as Merapoh Station, 43 miles beyond Kuala Lipis, the capital of Pahang, and 184½ miles from Gemas. Merapoh is the last station in Pahang territory and is about 3 miles from the frontier. At the end of 1927, the permanent way had been laid to five miles beyond the Kelantan frontier. A section of 63 miles in Kelantan between Tumpat on the East Coast and Manek Urai, is open for traffic, and this line when extended southward will meet the East Coast line from Gemas and provide through direct communication with Singapore from Kelantan. Construction is in progress southwards of Manek Urai towards Pahang. The distance between railheads in Kelantan is 58½ miles. Earthwork, etc., is in progress up to the Pahang boundary. An extension—13 miles long—has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to

Haad Yai junction, 145 miles distant, where a junction is made with the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on November 1st, 1921.

Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld. At Prai on the mainland opposite Penang, certain work on the wharves has been carried out. A causeway to carry two lines of rails and a roadway has been built across the Johore Strait connecting the Island of Singapore with the mainland.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,035 miles. The line is of metre gauge. On the mail trains on the West Coast main line, there are sleeping saloons and restaurant cars. There are 254 permanent stations and 33 flag stations.

The expenditure on capital account (including lines not yet open for traffic) was \$211,581,362 up to 31st December, 1927, of which \$171,890,778 was met from revenue, and \$39,690,589 from loan account.

The receipts in 1927 from all sources were \$23,055,515, an increase of 6.54 per cent., whilst expenditure chargeable to revenue on all accounts amounted to \$19,449,503, an increase of 27.85 per cent. The nett surplus for the years' working therefore amounted to \$3,606,012 compared with \$6,427,445 in 1926: the falling off is largely due to an expenditure of \$1,523,727 on flood restoration in open line areas. This surplus has been transferred to reserve as the nucleus of a Railway Renewals Fund.

There were no changes in the general rates and fares during the year.

A system of train control introduced in January, 1922, over a busy section of the line covering 105 miles has proved very satisfactory in controlling the movement of rolling stock, checking unnecessary haulage and in cases of breaches on the line expeditiously restoring communication. With the introduction of this system an enormous number of telegrams has been reduced. The system has been extended and now controls the main line between Ipoh and Gemas (239 miles).

**Passengers.**

The number of ordinary passengers carried was 14,555,190 in 1926 and 14,171,105 in 1927. The total receipts from passengers shew an increase of \$246,361 (2.81 per cent.).

**Goods.**

Receipts from goods train traffic rose by \$759,870 from \$9,428,593 to \$10,188,463.

**Capital expenditure.**

During the year the nett expenditure on capital account was \$6,439,767 as compared with \$5,441,346 in 1926.

**Construction.**

On the Kelantan section the line was opened for traffic as far as Manek Urai (63rd mile) and platelaying completed to the 70th mile and from the 76th to 82nd mile, and along 5½ miles near the Pahang boundary. Earthwork is well in hand over the whole section. Tunnels at the 69th mile have been completed while work in the tunnels at the 74th, 85th and 94th miles is well advanced. The expenditure on this section during the year amounted to \$3,153,570.

Work on the Pahang section was reopened at the beginning of 1924 and work on the whole length to the Kelantan boundary at the 188th mile, including a tunnel at the 172nd mile, has been completed. The expenditure during the year amounted to \$385,005.

**Other works.**

The new Engine and Carriage Sheds and Goods Yards at Seremban were completed, as also were the Goods and Marshalling Yards at Ipoh. Good progress was made on the Klang River Bridge. Work on the Kuala Lumpur deviation and doubling of the line from Batu Junction to Kuala Lumpur, including a double line tunnel under Police Head-quarters at Kuala Lumpur, progressed satisfactorily and the down line was opened for traffic. The work on Victory Avenue between the Railway Office and the Chartered Bank had progressed far enough to admit of the road being open for traffic.

Work on the scheme for a supply of water to Prai from Bukit Serayah was started in February, 1925, the modified scheme being completed during 1927.

A housing scheme for the Railway subordinate, artisan and menial staff estimated to cost \$4,765,000 was commenced in 1926 and on 31st December, 1927, 131 units had been completed and 634 units were in hand. The main portion of the scheme is the railway settlement at Sentul, near Kuala Lumpur. The scheme provides 1,740 additional units.

As a result of the abnormal floods in December, 1926, <sup>Floods.</sup> the East Coast Railway north of Triang and the Kelantan Railway were still closed for traffic at the beginning of the year: traffic was resumed over different sections of these lines at various dates between the 8th February and 1st June, 1927.

The Railway Board held 12 meetings during the year. It is <sup>Railway Board.</sup> composed of three official and six unofficial members: of the unofficials two are appointed from the Colony, one residing in Singapore and the other in Penang.

#### ROADS.

There are 2,600 miles of metalled roads, 113 miles of unmetalled roads and 1,972 miles of bridle-paths. The average cost per mile of maintaining all metalled roads was \$1,476 in 1927 as against \$1,430 in 1926. The total expenditure on maintaining roads, streets and bridges was \$3,834,550. The total mileage of roads treated with bituminous compounds is 904, of which 292 were added during the year.

There were no serious inundations during the year subsequent to the record floods which visited the country in December, 1926-January, 1927, and which caused widespread damage to the roads in all the four States. Restoration of much of the damage was carried out at a cost of \$1,444,612, considerable improvements being effected in the process. In Pahang where the Sungei Lepar caused vast devastation, the construction of the deviation proceeded apace and through communication by road to Kuantan was almost re-established prior to the wet weather at the end of the year. In spite of the admirable efforts of the department, a considerable amount of restoration work still remains to be done in this State.

Road improvements, including widening, straightening and raising were carried out in all district roads.

### VI.—JUSTICE, POLICE, PRISONS.

#### POLICE.

The approved strength of the Force on the 31st <sup>Strength.</sup> December, 1927, was 4,158 officers and men distributed in 182 police stations and 17 posts. New posts were established at Ayer Kuning and Kamunting in Perak and at Fraser's Hill.

The Force was 11 officers and 88 other ranks under strength at the end of the year.

Of the 46 Gazetted Officers 4 are Malays.

Considerable difficulty was experienced in obtaining suitable Malay recruits: Indian recruits offered themselves in large numbers.

#### Training.

The standard of training in drill and musketry at the Police Depot was maintained and special efforts were made to improve the system of instruction in the schools in co-operation with the Education Department. The year was marked by a very considerable advance in the instruction of Probationary Assistant Commissioners, Probationary Asiatic Inspectors and English-speaking Detectives in law and other subjects necessary for their profession.

#### Crime.

The year's total of serious crime, which includes murder, gang-robbery and robbery, shows an increase of 30 per cent. on the total for 1926 which was a record low year. The 1927 total, viz., 160, is however well below the quinquennial average of 176. Towards the end of the year a quite inexplicable wave of homicide arose which, though scarcely evident in Negri Sembilan and Pahang, was serious in Selangor but much more serious still in Perak. This murder wave raised the figures from 23 recorded murders in Perak in 1926 to 48 in 1927 and to 25 in Selangor as compared with 18 in 1926. The total number of murders was 86, of which only 11 were accompanied by robbery, and amongst these latter in several cases murder was the true motive and robbery only incidental.

Gang-robbery cases numbered 15, one less than the low record of the previous year.

Robbery figures show an increase of 19 over the low record of 1926 and repeat the 1925 total of 59. The Kinta Valley towards the end of the year became a little disturbed and was largely responsible for this class of crime which up to then had been well in check: no organised gang however obtained any hold during the year.

The total number of seizable offences of all kinds for the year is 5,063, which shows a very gratifying decrease on the record low total of 5,641 for 1926, and is very much below the average of 7,009 for the past five years. This satisfactory decrease may, in the opinion of the Director of Criminal Intelligence, be reasonably attributed to better police control of the criminal elements in the country, due to better investigation methods and to a newly awakened interest and eagerness amongst all ranks to take an active share in the conduct of investigations and in the surveillance of bad characters.

Progress continues to be made in the development of the Criminal Intelligence Branch. Criminal Intelligence.

The work of the Criminal Registry (Finger-print Bureau) was carried out as in former years with the utmost reliability and expedition.

#### PRISONS.

There are six prisons in the Federated Malay States. Statistics.  
On the 1st January, 1927, they contained 944 prisoners against 1,001 on the 1st January, 1926; during the year 5,568 were admitted; and 1,123 remained at the close of the year. The daily average figures were: Civil Prison, 125; short-sentence and revenue grade, 474; long-sentence and condemned, 455. Nineteen executions were carried out. No prisoner escaped. Four prisoners committed suicide. The daily average of sick was 2.00 per cent. as compared with 1.51 in 1926. There were 32 deaths, of which 1 was from malaria, 1 from phthisis, 1 from pneumonia, 5 from beri-beri and 24 from other causes.

The total expenditure of the department totalled \$488,766. Expenditure.  
The daily average of 1,054 prisoners was maintained at a nett cost of \$431,944, giving an annual cost per head of \$409. The annual cost in 1926 was \$396 and in 1925 \$335. The increase was principally due to the introduction of new scales of salary for the European and Asiatic staff.

An additional workshop at the Convict Establishment, Taiping, was partially completed during the year solely by prison labour. Works.

#### VII.—PUBLIC WORKS.\*

The total expenditure authorised for the year was \$28,802,099, of which \$21,087,943 was spent, being an increase of \$4,814,661 or 30 per cent. above that of the previous year. General expenditure.  
The year was a record one and the expenditure exceeded that of the former record year, 1921, by nearly 1½ million dollars.

The cost of administration (\$1,647,274) represents 7.81 per cent. of the total expenditure as against 10.42 per cent. in 1926. The expenditure under Annually Recurrent amounted to \$8,242,104: the unexpended balance was \$454,844.

The annual maintenance of Works and Buildings cost \$1,803,807, which represents 3.10 per cent. of the total cost of the buildings, as against 2.86 per cent. in the previous year. Buildings.

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\* Roads are dealt with under Part V.



Six hundred and fourteen new buildings were erected. The total number of buildings maintained was ten thousand eight hundred and fifty-one, valued at \$42,042,670. Quarters for forty-six senior officers and one hundred and sixty-eight subordinates were completed.

In connection with the shortage of housing accommodation in Kuala Lumpur and pursuant to the recommendations of a Committee of Enquiry appointed by Government, a type of concrete house, which could be rapidly constructed, was evolved by the Selangor Public Works Department in conjunction with a local contractor and thirteen houses of this type were erected in Kuala Lumpur. This had the effect of reducing building prices generally.

Good progress was made on the construction of the English school at Kuala Kangsar and the Supreme Court at Ipoh and work was commenced on the Chinese Protectorate in Kuala Lumpur and the Central Decrepit Camp at Sungei Buloh. The new Institute of Medical Research and the Chinese Free School at Kuala Lumpur were almost completed and the new Victoria Institution was commenced, His Highness the Sultan having laid the foundation stone in October. New post offices were erected at Bentong and Kuantan.

Rivers. Six hundred and twenty-eight miles of river channels were cleared at a cost of \$268,816.

Waterworks. The capital cost of all waterworks is \$11,792,546, the cost of maintenance for the year was \$214,641 and the revenue collected \$635,405.

Fraser's Hill. The expenditure on the development of Fraser's Hill was \$213,900, the amount spent on maintenance being \$98,500. It is satisfactory to record that more buildings are being erected by private enterprise.

Cameron's Highlands. The road to Cameron's Highlands was completed to beyond the 15th mile from Tapah and the formation constructed to near the 19th mile. Owing to lack of progress displayed by the earlier contractors engaged on the road, the former contracts were cancelled and a "schedule of rates" contract entered into with a Singapore firm to complete the road in three years' time. The expenditure in connection with the road and preliminary development work for the year amounted to \$377,718.

A detachment of Burma Rifles was engaged in clearing operations at Tanah Rata. About 100 acres of jungle were felled by this unit and in addition 16 acres were felled, cleared and burned. The cost however was high and it is improbable that the experiment will be continued.

Generally, it may be said that there was a steady fall Tenders. in prices throughout the year. Labour has been more plentiful although the dearth of skilled artisans continues.

Reputable firms of European contractors frequently submitted competitive tenders without success.

#### ELECTRICITY SUPPLY.

From 1st January, 1927, the Electrical Department, which General. had hitherto been a branch of the Public Works Department, was made a separate Federal Department under a Director.

This step was considered necessary owing to the great development of electricity throughout the Federated Malay States during the past few years and the increasing expenditure on plant and apparatus.

The year under review has been one of remarkable Development. growth in the generation and application of electricity throughout the country, and considerable extensions were carried out to both public and private installations.

Work was commenced on the hydro-electric scheme in Perak by the Perak River Hydro-Electric Power Company which has the concession for electric power supply in the Kinta valley.

By the end of the year considerable progress had been made in the preparation of the dam site at Chenderoh, and work was well in hand on the Auxiliary Steam Station at Malim Nawar. It is anticipated that a supply of electric power will be available for mining and for the lighting of certain small towns from the Malim Nawar Station towards the end of August, 1928.

A large power station was completed and put into service in Kuala Lumpur and additional plant was installed in the Government Power Stations at Ipoh and Seremban. The construction of new power stations was undertaken by the Government at Klang and Taiping, and these are expected to be in operation in September, 1928.

A complete scheme was evolved for a power station and distribution system for Kuala Lipis and materials were indented for.

The Electrical Department took over all electrical work in connection with the railway, and from July all the power for the Central Workshops of the Federated Malay States Railways in Kuala Lumpur was supplied from the new Bungsar Power Station.

A new electric station was erected in Telok Anson and before the end of the year a full supply of electricity was available there. This concession was given to a private company.

Estimates and schemes were prepared for electric supply to Gemas, the Central Mental Hospital at Tanjong Rambutan and Ulu Buloh Leper Settlement.

Inspections were made at Port Dickson, Kuala Pilah, Kuala Klawang, Tampin, Bentong, Port Weld and Fraser's Hill in connection with proposed schemes for these places.

The township of Rawang was electrically lighted, a bulk supply being purchased from the Rawang Tin Ltd.

The question of co-ordinating many of these schemes is one which will require serious attention in the not far distant future.

#### Financial.

The capital value of the Kuala Lumpur undertaking at the end of 1927 was	...	...	...	\$4,317,381
The total revenue earned was	...	...	...	648,724
The total expenditure was	...	...	...	370,469
The balance transferred to net revenue was	...	...	...	278,254

#### IPOH.

The capital value of the Ipoh undertaking at the end of the year was	...	...	...	\$830,438
The total revenue earned was	...	...	...	280,590
The total expenditure was	...	...	...	133,041
The balance transferred to net revenue was	...	...	...	147,549

#### SEREMBAN.

The capital value of the Seremban undertaking at the end of the year was	...	...	...	\$475,661
The total revenue earned was	...	...	...	157,765
The total expenditure was	...	...	...	74,240
The balance transferred to net revenue was	...	...	...	88,524

## VIII.—PUBLIC HEALTH.

## VITAL STATISTICS.

Births and deaths figures are obtained from notifications compulsory under the Registration of Births and Deaths Enactment which is everywhere in force. The total number of births and deaths is approximately correct. The accuracy of diagnosis as to causes of deaths is in many cases open to question, for comparatively few of the cases are seen by a qualified medical man previous to decease.

Deaths in towns are debited against the town only if the deceased was resident there for three months or more prior to death. Chronic cases from the rural areas drift to the towns in the hope of getting more skilled treatment and even with a qualifying period of three months, a number of deaths must be debited against the towns which should be debited against the rural areas where the disease was contracted.

The population of the Federated Malay States as Population. estimated at the end of June, 1927, was 1,504,823 distributed as follows:

Perak	...	...	...	...	664,680
Selangor	...	...	...	...	467,868
Negri Sembilan	...	...	...	...	209,118
Pahang	...	...	...	...	163,162

On the assumption that the races remained in the same proportion as in the census year the race distribution was as follows:

Europeans and Americans.	Eurasians.	Malays and other natives of the Archipelago.	Chinese.	Indians.	Others.
7,188	3,551	567,059	532,859	388,188	5,978

Forty-eight thousand and thirteen births were registered Births. during the year, giving a birth-rate of 31.91 per mille of population as against 39,834 births and a birth-rate of 30.28 in 1926.

Forty-eight thousand three hundred and twenty-three Deaths. deaths were registered, giving a death-rate of 32.11 per mille. The number of deaths in 1926 was 38,445 and the rate was 29.22.

The general death-rate for the four States was 32.11 per mille as against 29.22 for the whole of the Federated Malay States (Pahang excluded) for 1926; this increase was probably due in part to the effects of the floods.

The number of deaths attributable to fevers (most of them probably malaria) was 20,736 or 42.91 per cent. of the total. Last year the percentage was 48.

Dysentery and diarrhoea accounted for 7.15 per cent. of the total deaths, pulmonary tuberculosis for 4.16 per cent., pneumonia for 6.66 per cent. and convulsions for 11.08 per cent.

#### INFANT MORTALITY.

The number of deaths of children under one year was 9,752, giving an infantile mortality rate per thousand births of 203.11 against a mortality rate of 193.75 in 1926. The death-rates for the four States were:

States.	Deaths of children under one year.	Death-rate per 1,000 births.
Perak ... ..	3,687	181.33
Selangor ... ..	3,018	189.91
Negri Sembilan ... ..	1,448	229.62
Pahang ... ..	1,599	291.68
Total ... ..	9,752	203.11

#### PUBLIC HEALTH.

The general health of the country was not satisfactory during the year under review, the death-rate being 32.11 per mille as against 29.22 per mille for the previous year and 23.60 per mille for the year 1925. The outbreaks of cholera, plague, smallpox and beri-beri which occurred during the year contributed to this.

The increase in the death-rate was most marked in the State of Pahang, where it rose from 25.03 per mille in 1925 to 43.32 per mille in 1927. The records for 1926 were lost in the floods.

There is little doubt that this increase was largely due to the lowered vitality of the population resulting from the floods which occurred at the end of 1926 and in January, 1927, and to the destruction of vegetable gardens and padi crops causing an outbreak of beri-beri. Malarial fever due to seepage and residual water following the floods also

caused many deaths. Every effort was made by the Health and Hospital Branches to deal with these effects of the floods, and the Institute for Medical Research issued large quantities of rice polishings extract, but it was impossible to control these diseases over large tracts of unopened country with communications broken down. The outbreak of beri-beri proves how very narrow the margin is amongst Asiatics between health and disease, and also how they immediately react to any interference with the vitamin contents of their food supplies.

In spite of all that can be done the population of all races are using more and more polished rice. It is easier to obtain, more pleasant to eat, and more easily cooked than the other forms of rice which either require husking before use, or when cooked are unpleasant both in taste and appearance to many people.

The general health of the European population was good. The total European and American population as estimated at the end of December, 1927, was 7,188. There were 119 births, giving a birth-rate of 16.56 per mille and 35 deaths with a death-rate of 4.87 per mille as compared with a birth-rate of 19.86 per mille and a death-rate of 5.46 per mille for the previous year.

General  
European  
population.

The total number of deaths attributable to fevers, probably mostly malarial, was 20,736, an increase of 4,205 over the figure for 1926. There were 49,452 cases treated in hospitals with 2,543 deaths and a death-rate of 5.13 as compared with 38,633 cases with 1,792 deaths and a death-rate of 4.64 for the year 1926 and 23,056 with 993 deaths in 1925. The year under review was like 1926 a bad malarial year. The raising of the normal sub-soil water level throughout the country due to the floods thereby increasing the number of mosquito breeding places and consequently the mosquito population, was probably the chief cause of this.

Malaria.

The distribution of quinine was actively carried out, and the Health Branch took all possible measures to cope with the prevailing conditions, but these were so universal and widespread that complete success was hardly possible, and all that could be done was to control the outbreak which but for the efforts of the staff would have been far worse.

There were eight cases of blackwater fever with three deaths.

Blackwater  
fever.

## Pulmonary tuberculosis.

The number of cases of pulmonary tuberculosis treated in hospitals during the year under review was 2,413 with 1,116 deaths and a death-rate of 46.33 per mille as compared with 2,329 cases with 995 deaths and a death-rate of 42.72 per mille for the year 1926. The number of fatal cases remains high but is not alarming when it is realised that in the majority of cases patients only come into hospital to die. Extensive propaganda in the form of pamphlets and posters was continued by the Public Health Education Committee.

Local conditions are unsuitable to sanatorium treatment, and it is very difficult to induce patients to go any appreciable distance from their homes. Special wards for this disease will however be erected at the Decrepit Settlement at Sungei Buloh, now in the course of erection. Overcrowding in the towns and the sanitary conditions of the town houses are still unsatisfactory.

## Yaws.

The treatment of yaws by arsenical compounds was continued. A total number of 24,078 injections were given during the period under review. The numbers of cases treated in each State in comparison with the number treated in 1924, 1925 and 1926 are shown in the following table:

States.	1924.	1925.	1926.	1927.
Perak ... ..	9,884 ...	9,155 ...	9,358 ...	2,307
Selangor ... ..	2,231 ...	1,805 ...	1,680 ...	2,504
Negri Sembilan ... ..	7,267 ...	6,426 ...	4,543 ...	4,465
Pahang ... ..	3,997 ...	9,403 ...	7,893 ...	3,913
Total ... ..	23,379 ...	26,289 ...	23,474 ...	13,189

The campaign against this disease was continued on previous lines but though the Malays, who form the vast majority of those affected, are very keen on the treatment, they still cannot be persuaded to continue treatment after the outward and visible signs of the disease have disappeared. The decrease in the number of cases is very largely due to the preventive work of the travelling dispensaries in the more accessible areas. The areas on the Perak and Pahang rivers are gradually being dealt with by the travelling dispensary motor launches.

## Leprosy.

There were 480 fresh admissions and 80 deaths from leprosy during the year.

One hundred and four self-diagnosed cases voluntarily sought admission to the Kuala Lumpur Leper Asylum. In 1926 the number was 72. Admission is granted when the diagnosis of leprosy has been confirmed by the Medical Officer on clinical and bacteriological grounds: this precaution is necessary as the later lesions of syphilis and leprosy are occasionally somewhat similar and have been confused, especially by the Chinese.

A large proportion of the lepers at present seeking admission, or sent by hospitals, are in the early stages of the disease. Previously, the asylum was sought mainly as a last resort by far advanced lepers often horribly mutilated and mostly very infective.

Illustrated and other pamphlets on leprosy were widely distributed by the Committee for Public Health Education during the year.

The latest forms of treatment are being carried out and special investigations into the disease are in the hands of the Institute for Medical Research.

A new Federal Leper Settlement is in course of erection at Sungei Buloh.

An investigation into the incidence of cancer among the inhabitants of Malaya is being carried out at the Institute for Medical Research at the request of the Ministry of Health. Statistics are being collected, and a report will be issued in due course. Cancer.

One hundred and fourteen cases of cholera occurred in Perak with 74 deaths. There were three distinct outbreaks, the first occurring early in June on estates in the Batang Padang area of Lower Perak, and at Sitiawan. A further outbreak occurred in North Perak in July and the most serious outbreak commenced on 18th August, 1927, and lasted for three weeks. In this outbreak which occurred on the Perak river between Parit and Teluk Anson there were 57 cases and 40 deaths. Anti-cholera vaccination was carried out in as wholesale a manner as possible in the infected areas, while pamphlets giving warnings and instructions printed in the vernacular were lavishly distributed. The motor launch belonging to the Medical Department at Teluk Anson proved of great value in this outbreak, as many cases occurred in the riverine kampongs. Cholera,

It is believed that the disease was originally imported by carriers from India.



**Plague.**

Thirty-three cases of plague were reported with 80 deaths during the year. The majority of these cases occurred in and around Ipoh. The usual precautions were taken. How the first infection was introduced was not definitely established but it is thought extremely probable that infected fleas were imported with either Siamese or Indian rice. Clinical observations by the Medical Officer, Ipoh, tended to confirm this theory. Anti-rat measures were carried out by trapping and poisoning and this is being continued. There was no rat mortality and only one rat trapped was found to be plague-infected.

**Typhus fever.**

Eighty-four cases of tropical typhus were diagnosed at the Institute for Medical Research during the year.

The investigations into this disease continue at the Institute.

**Smallpox.**

There were 237 cases of smallpox with 24 deaths; 170 with four deaths in Selangor and 63 with 20 deaths in Negri Sembilan; Perak recorded three cases and Pahang one.

In Negri Sembilan the cases occurred in March, April and May. In Selangor, the Kuala Lumpur and Ulu Langat districts were chiefly affected, two epidemics occurring in May and August, but the disease was apparently of a much milder form than the earlier outbreak in Negri Sembilan. Considerable difficulty was experienced in tracing out cases and contacts and preventing them from leaving infected areas. Prosecutions were made in several cases under the Quarantine and Prevention of Disease Enactment and heavy fines were inflicted in the Courts. Leaflets, giving details of these and assuring the public that it was to their own interest to report cases early and to assist the Government, were published in various languages and distributed in great numbers.

The number of vaccinations performed was 269,509 as compared with 113,914 performed last year. They were distributed as follows:

States.	1924.	1925.	1926.	1927.
Perak ... ..	54,278	86,125	88,539	106,865
Selangor ... ..	11,745	26,369	14,256	65,091
Negri Sembilan	6,563	8,268	5,392	64,639
Pahang ... ..	5,821	5,543	5,727	32,914
Total ... ..	78,407	126,305	118,914	269,509

The incidence of the disease amongst vaccinated children gave the impression that the Hong Kong lymph was not affording adequate protection, and Java lymph was substituted with complete success. In 1929 the department hopes to prepare its own vaccine lymph.

The number of cases of beri-beri treated was 2,782 with 447 deaths and a death-rate of 16.07 as compared with 1,075 cases with 140 deaths and a death-rate of 13.02 for the corresponding period of 1926. Beri-beri.

There was a very marked increase in the number of cases treated in Pahang—due to the exceptional conditions in the State resulting from the floods: the cases came chiefly from the railway construction areas north of Kuala Lipis and the mining areas in the Bentong, Raub and Kuantan districts.

The total number of cases of venereal disease treated in hospitals during the year was 5,236 with 74 deaths and a death-rate of 1.41 per mille as compared with 4,428 cases with 51 deaths and a death-rate of 1.15 for the previous year. In addition, 20,508 cases were treated in clinics and treatment centres. Venereal diseases.

As in the previous year, considerable progress has again been made in combating venereal diseases, new treatment centres have been opened, which were well attended, and there has been an increase of attendance at the old centres.

This satisfactory progress may be attributed to the propaganda work which has been carried out, and to the careful selection and special training given by the Venereal Disease Specialist to the staff appointed to the different clinics.

Injections of arsenical compounds are given at all hospitals and dispensaries.

The increase in the numbers treated for syphilis has no doubt some bearing on the reduction in the number of mental patients admitted to the Central Mental Hospital for general paralysis of the insane.

### INFANT WELFARE WORK.

Infant welfare work continues with great success and the attendances at the clinics have greatly increased. The numbers attending clinics in Kuala Lumpur, Ipoh, Taiping and Seremban for 1926 and 1927 were as follows:

Place.	1926.	1927.
Kuala Lumpur ... ..	29,831	33,979
Ipoh ... ..	14,060	16,796
Taiping ... ..	13,559	28,061
Seremban ... ..	3,895	13,640
Total ...	61,365	92,476

It is very gratifying to record a large increase in Malay attendances: in Kuala Lumpur alone they increased from 4,464 in 1926 to 10,833 in the year under review.

Each centre is under the charge of a Lady Medical Officer and specially trained Infant Welfare Sisters and has also a staff of Asiatic Health Visitors who work part time visiting in the district.

These centres do very excellent anti-natal work, and also serve as outdoor dispensaries for women and children. The numbers attending increase yearly and many patients seeking advice or treatment come from great distances. It is noteworthy that the infantile mortality figures of the four large towns are substantially reduced this year. In Seremban the infantile mortality rate was 147.30 as against 209.33 for the previous year.

### INSPECTION OF SCHOOLS.

The medical inspection of schools was carried out as far as possible with the staff available. Practically every school was inspected at least once during the year. In Selangor the schools which were on the itinerary of the travelling dispensaries were visited more frequently than once a month and treatment was given for all minor ailments.

Towards the end of the year a Lady Medical Officer with considerable experience in school work was specially detailed for the inspection of girls' schools.

The inspections were carried out on the same lines as the routine medical inspection of school children in England, special attention being given to examination for conditions common in the tropics. Special printed cards were designed and the condition of each child was recorded on a separate card.

It is hoped, when the Medical Inspectors of Schools have been appointed, to be able to extend this systematic inspection of school children. Four Medical Inspectors of Schools have been approved for 1928.

#### PUBLIC HEALTH EDUCATION.

The Public Health Education Committee met on several occasions during the year: at the Horticultural Shows exhibitions were put up which were well attended, lectures were given and pamphlets which had been prepared by the Committee were distributed in large numbers in various languages.

At the Malayan Exhibition held in Kuala Lumpur from 29th July, 1927, to 1st August, 1927, exhibits on anti-malaria measures and other public health subjects were shown by the Malaria Advisory Board in conjunction with the Committee for Public Health Education, the Infant Welfare Advisory Board, the Institute for Medical Research and the Specialist on Venereal Diseases. The Acting Malaria Research Officer and his staff spent considerable time on these exhibits and supplied a good deal of the material.

The exhibits were housed in a large building forming two sides of a square, one side being wholly taken up by the Infant Welfare exhibit and the other by exhibits on malaria, social hygiene, beri-beri, Japanese river fever, anti-rabic treatment, hookworm, trachoma, yaws and general public health matters. Officers of the various branches were in attendance to explain the various exhibits and answer the great number of questions asked.

The exhibition was opened for four days, and as it happened to be held during the August holidays, a large number of visitors than usual from various parts of the country came to see the exhibition. The official attendance for the four days of the exhibition was approximately 59,600 and at times the Medical and Health Sections were so crowded that people had difficulty in getting into the building.

Popular lectures on malaria were given in Malay and Chinese in various parts of the country, these were illustrated by lantern slides and were well attended.

A cinematograph film of work done at the Infant Welfare Centre, Kuala Lumpur, was also exhibited at the Horticultural Shows in Kuala Lumpur and Telok Datoh and on several other occasions to large and interested audiences of various nationalities.

Lectures on venereal diseases, illustrated by lantern slides, were given in Chinese, Tamil and other clubs and institutions.

### QUARANTINE AND PORT HEALTH WORK.

A total of 80,899 immigrants passed through the Quarantine Camp, Port Swettenham, during the year 1927 as compared with 99,066 for the year 1926. Improvements were made in the Camp, whereby absconding was made more difficult.

During the year 64 ships with immigrant labourers were boarded and inspected. Of the 64 ships, 16 were infected—one with cholera, two with smallpox, two with cerebro-spinal meningitis, one with cerebro-spinal meningitis and chicken-pox and ten with chicken-pox.

The number of immigrants who entered the Quarantine Station, Port Swettenham, was 80,399, the number remaining on 31st December, 1926, was 1,697, making a total of 82,096. The largest number on any one day was 7,649 on the 14th of July. The daily average of immigrants in the Camp was 2,241. The following table shows how these immigrants were distributed:

Discharge to Dépôt ... ..	80,296
Transferred to Klang Hospital ... ..	61
Absconded from the Quarantine Camp ... ..	58
Died in hospital and cholera wards ... ..	260
Remaining on 31st December, 1927 ... ..	1,419
Total ... ..	82,096

### MEDICAL INSTITUTIONS.

There were on the 31st December, 1927, in the Federated Malay States, the following medical institutions:

- 4 European Hospitals;
- 34 District Hospitals (each with an Outdoor Dispensary);
- 3 Women's Hospitals;
- 3 Leper Asylums;
- 5 Gaol Hospitals;
- 1 Quarantine Camp;
- 4 Vagrant or Decrepit Wards;
- 1 Mental Hospital;
- 1 Pasteur Institute (attached to the Institute for Medical Research);
- 30 Dispensaries working in towns, distinct from hospitals;
- 4 Infant Welfare Centres;
- 4 Venereal Diseases Clinics.

The number of in-patients treated in hospitals was 142,094 with 11,743 deaths and a death-rate of 8.26 as compared with 127,882 with 9,178 deaths and a death-rate of 7.21 in 1926.

During the year nursing by female Asiatic Nurses, under the supervision of European Sisters, was introduced into the first and second class male Asiatic wards of some of the larger hospitals. The results are apparent in the improved appearance of the wards and the increased comforts of the patients. It is hoped to extend the system as more nurses and more accommodation for them become available.

The work in the Women's Hospitals and wards continues to increase. It is very gratifying to note the increase in the number of Malays attending at the Kuala Kangsar Women's Hospital as out-patients where it exceeded by far that of other nationalities. The willingness of the Royal Malays to be admitted to the hospital has had a great influence on the other Malays. The daughter of His Highness the Sultan of Perak was a patient in the hospital in October.

The number of out-patients treated in all hospitals, dispensaries, travelling dispensaries and dispensary boats for 1927 was 789,764 as compared with 630,052 in 1926 and 584,261 in 1924.

Of the total of 789,764 cases, 170,267 were treated by the travelling dispensaries and 40,665 by dispensary boats on the Perak and Pahang rivers.

During the year under review a larger and improved type of travelling dispensary was supplied.

Motor dispensary boats were supplied for the Pahang and Perak rivers. They have done very useful service in reaching the riverine population and distributing medicines in the kampongs on the river banks and have justified their purchase. The Perak river boat proved invaluable in the cholera outbreak in Lower Perak.

There were at the end of 1927, 1,816 male and 886 female patients at the Central Mental Hospital. Mental diseases.

The total admissions during the year were 900, an increase of 165 on last year, while the discharges numbered 414 as against 860 last year and 276 in 1925. Of these, 292 were discharged recovered and 67 as relieved. The balance of 55 was made up of one "not insane" and 54 who were discharged "unimproved" under bond.

The reduction in admissions for general paralysis of the insane is significant. In 1925 there were 68 cases and in 1927, 85 cases. There appears to be no doubt that anti-venereal work is having a beneficial effect.

Pasteur  
Institute.

The Pasteur Institute continued to do good work and 70 cases received anti-rabic treatment. Of these cases, 21 had been bitten by animals proved rabid by laboratory examination, three had been bitten by animals certified rabid by a medical or veterinary officer, four had been bitten by animals having a history highly suggestive of rabies, 34 had recent abrasions contaminated by the saliva of proved rabid animals, and six had had similar contamination of recent abrasions by the saliva of animals thought to be rabid, but which were untraceable.

Nineteen Europeans, five Eurasians, three Malays, ten Chinese and 33 Indians underwent treatment: no deaths occurred.

#### IX.—EDUCATION.

Financial.

The expenditure upon Education (including \$1,129,274 spent by the Public Works Department on the building and upkeep of schools) was \$3,833,578. Of this sum, \$457,536 was paid in grants to English aided schools and \$56,086 in grants to Chinese vernacular schools.

The total revenue, derived mainly from school-fees, was \$147,686.

Staff.

Four European Masters were recruited for the Federated Malay States.

At the end of the year the European male officers of the department on the Federated Malay States Establishment numbered 43 and the female 4. This included administrative and teaching staff.

In no previous year has the European staff of the department been so large, though there are still vacancies to be filled to allow for the increasing number of officers lent to the Unfederated Malay States and for officers on leave. With the opening of Raffles College more local teachers should be qualified to take over secondary work.

Higher  
education.

At present the highest local educational institution open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore.

The building of Raffles College, which will provide a higher education in subjects other than medicine, neared completion and the College will open in June, 1928.

The Malay College, Kuala Kangsar, receives probationers for the Government service.

During the year it was decided to institute a School of Agriculture at Serdang, with a view to providing practical and scientific courses in agriculture.

Evening classes were held in all the States. In Perak and Negri Sembilan again the only classes in demand were those for elementary English. In Kuala Lumpur the curriculum comprised English, shorthand, book-keeping, typewriting, mathematics, machine drawing, magnetism and electricity, electrical engineering, workshop mechanics, surveying, engineering and art. Of the students who joined these Kuala Lumpur classes, many were apprentices in Government workshops. In Pahang there were classes in English, arithmetic and typewriting.

Evening classes.

There were Normal Classes for teachers in all the States except Pahang, where correspondence classes take their place.

Of the 15,702 pupils in English schools, 405 held Government scholarships, enjoying free education, board and lodging; 25 held other scholarships; 2,832 received free education from the Government and 279 free education from other sources. Thus, 3,541, or 25.44 per cent., receive a free education.

Scholarships and free education.

All pupils in Malay vernacular schools enjoy free education.

There were 22 English Government schools for boys, 13 English grant-in-aid schools for boys and 12 for girls. The total average enrolment was 5,952, 6,417 and 3,332 respectively.

English schools.

The expenditure on the Malay College, Kuala Kangsar, was \$85,012. At the end of the year there were 129 students, all boarders educated and maintained entirely at Government expense.

Malay College, Kuala Kangsar.

One boy died during the year. The general health of the boys was satisfactory.

Cricket, hockey and association football are played regularly.

There were 54 Cadets and 75 Scouts. The camp for both units was cancelled owing to an outbreak of chicken-pox.

At the beginning of the year there were 331 students and two probationers in residence at the Sultan Idris Training College for the training of Malay vernacular teachers. After the fasting month 93 students and two probationers completed their course and left and 125 new students and three probationers joined.

Sultan Idris Training College.



The total expenditure was \$142,754, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements. The cost of educating a student was \$369 a year.

The curriculum comprises the Malay language and literature, Malay history, geography, the theory and practice of teaching, hygiene, physical training, rural science, handiwork and religious instruction. A few students learnt music.

The strength of the two College platoons in the Malayan Volunteer Infantry was 150.

Malay  
vernacular  
education.

The Malay vernacular schools are all Government institutions and provide free education. There are 408 schools for boys and 72 for girls with average enrolments of 27,806 and 3,492. The Malay teaching staff numbers 1,345.

The teacher trained at Sultan Idris College takes a keener interest than the older type of teachers in school gardening, while the scientific study of his own language and history, arithmetic and geography has given him a modern mind. Of the value of the work done by the Malay vernacular schools there is no doubt. They teach nothing to distract the Malay villager from the pursuits of his independent agricultural life.

Tamil  
vernacular  
schools.

There are 299 Tamil vernacular schools with an average enrolment of 10,909. Estates continued to build and equip new schools. It was still difficult to recruit trained and efficient teachers.

During the year a European Officer with a knowledge of Tamil was detailed to report on these schools. His report, when ready, should provide data for systematising and improving instruction in these schools.

Chinese  
vernacular  
schools.

Three hundred and fifty-three Chinese schools were registered with 764 teachers and 18,924 pupils.

Grants were paid to 59 schools.

The standard of sanitation in these schools is now fairly satisfactory.

The evening training class for Chinese teachers was continued at Kuala Lumpur. There were 28 students in three classes.

There is only one Government Chinese school.

A series of readers and a Chinese school geography were nearly completed. Manuals on arithmetic and hygiene are contemplated.

The Trade School at Kuala Lumpur trains mechanics for motor engineering work. There were 36 students. The practical aptitude of the Malay students is most gratifying. Technical education.

A Trade School at Bagan Serai trains students in carpentry and furniture-making. The average enrolment was 47 and the cost per head \$142.

The provision of additional Trade Schools will be considered.

#### X.—LANDS AND SURVEY (INCLUDING GEOLOGY).

The area in private occupation at the end of the year amounted to about 2,493,635 acres under agricultural titles, and 199,524 acres under mining titles. Area under title.

It is estimated that, of the 27,623 square miles covered by the four States of the Federation, 14.9 per cent. is land in private occupation, 19.7 per cent. is forest reserve and 65.4 per cent. is still State land, including land reserved for other purposes than forests.

The land revenue (including \$2,690,210 derived from Land Sales) amounted to \$7,559,954 as compared with \$6,199,206 (including \$1,691,367 derived from Land Sales) collected in 1926. Land revenue.

The cost of the Survey Department, Federated Malay States, is summarised as follows: Cost of the Survey Department.

	Expenditure.		Revenue and reimbursements.		Nett cost.
1927 ...	\$1,708,259	...	\$653,881	...	\$1,054,378
1926 ...	1,581,943	...	494,124	...	1,087,819
1925 ...	1,450,393	...	374,506	...	1,075,887

The earnings of the Revenue (or Titles) Survey Branch, as determined by the application of the schedule of fees to work actually completed during the year, amounted to \$526,754 or 60 per cent. of the total expenditure of the Branch. The corresponding figures for 1926 were \$405,000 and 50 per cent. Revenue Survey Branch.

Recruiting proceeded vigorously and training methodically. The training period both for field and office apprentices is four years. Experience has shown that it is unwise to cut this down by more than one year even for the most promising recruits. Consequently it will be some time before the full effects of recent recruiting are felt. The systematic effort to improve efficiency has been maintained and, in addition to inspections, Training and recruiting.

the whole subordinate field staff was assembled in camp for a month's intensive training. The results of this camp and of the regular classes held for members of the office staff were most encouraging.

#### Topographical.

The Topographical Branch carried out surveys on the standard scale of one mile one inch in Kedah and Pahang covering 1,163 square miles and on a scale of four inches one mile in Penang covering 51 square miles. Forest reserves with an area of 97 square miles were surveyed on a four inches to a mile scale and at Cameron's Highlands five square miles were completed on a ten-inch to one mile scale. In addition, the large scale detailed surveys of Kuala Lumpur and Ipoh were continued. The progress made was satisfactory, adequate labour being available for the first time for several years.

Trigonometrical work was confined to some revision in Perak and to the fixation of control points in Pahang in advance of the topographers. Pressure of work in other branches prevented any progress being made with the programme of precise levelling.

#### Maps.

The Map Production Branch, which worked at full pressure during the year, fully maintained the high quality of its publications. One of the most striking features of the year was the very large increase in the demand for maps by the public, while the production of forest maps from air photographs constituted a new departure.

#### Meteorological.

Responsibility for the direction of meteorological activity was assigned to the Surveyor-General, Federated Malay States and Straits Settlements, at the beginning of 1927. As a preliminary to scientific investigation and a systematic study of the climate of Malaya a scheme of development was submitted to and accepted by all Governments concerned. The proposals involve the establishment of groups of "second order" stations down each coast and along the centre of the Peninsula. At these stations determinations of barometric pressure, temperature, humidity, rainfall, wind direction and velocity, the amount and type of cloud and the duration and intensity of thunderstorms will be recorded. In addition it is hoped to establish a large number of stations at which temperature and rainfall data will be collected with the co-operation of the planting community.

The organisation outlined should provide a foundation on which can be built eventually a separate Meteorological Department capable of dealing comprehensively with the needs

of aviation, upper-air research work and, following the organisation of the distribution and exchange of information with neighbouring countries, weather prediction.

The work accomplished during 1927 includes the selection and acquisition of station sites, the ordering of essential instruments and the recruitment and partial training of a proportion of the subordinate staff which will be required.

Two stations were established in Kedah near the centre of the path of totality of the 1929 Solar eclipse for the purpose of recording the meteorological data necessary for the selection of the most suitable observatory sites for the various scientific expeditions requiring them.

Climatological and meteorological summaries of the records of the stations established at Cameron's Highlands, Fraser's Hill and Kuala Lumpur and of the various temperature and rainfall stations have been printed and distributed to the Air Ministry and the Meteorological Offices of neighbouring countries. With the co-operation of the Marine Department special arrangements were made for enlarging the scope and extent of the observations of thunderstorms with a view to determining the degree to which they might close the Straits of Malacca to airships.

A report on Trengganu surveys was supplied by the General. Surveyor-General at the request of that Government. It completes the series presented to the Governments of the Unfederated Malay States. The visits made for the purpose of these reports have been of value in many ways but principally in that they have kept officers of the head-quarters staff in touch with seconded officers, and have led to a uniformity in technical methods throughout Malaya together with a knowledge and appreciation of recent developments which would not otherwise have been obtained.

A report was also furnished at the request of the Government of British North Borneo on the surveys and the organisation of the Survey Department in that State.

#### GEOLOGY.

The rough geological survey of Johore was completed, and continued progress was made in Trengganu. A book on the Geology of the Malayan Ore Deposits was prepared by Mr. J. B. Scrivenor, Director of the Geological Survey, to be published early in 1928.

An independent opinion on the geology of Kinta was obtained by engaging Dr. R. H. Rastall to come out for a few months, and his report was laid before the Federal Council. His scientific results were published in journals in England. His work is extremely valuable as having settled the controversy on this subject, and future work will be based upon his results.

## XI.—LABOUR.

### General.

The majority of labourers in the Federated Malay States are Chinese and Southern Indians. The latter are chiefly engaged in agricultural work and on public services: the former in agriculture and every other form of manual labour. Skilled work is almost entirely in the hands of the Chinese.

In addition there are about 4,550 Javanese labourers, immigrants from the Netherlands East Indies. This class of labour is recruited mainly for the Kuala Lipis and Kuantan districts of Pahang. One thousand seven hundred and thirteen of these labourers are employed on contracts of service for 900 days' work entered into in Java. This is the only form of indentured labour in the Federated Malay States. All other labourers of all races are at liberty to leave their employment at any time on giving a month's notice.

Conditions of labour are governed by the provisions of the Labour Code, 1923, and by the Netherlands Indian Labourers' Protection Enactment, 1927. These Enactments are administered by a Labour Department under the direction of the Controller of Labour, Malaya. Officers of the Chinese Protectorate are appointed Deputies or Assistant Controllers of Labour to deal with questions of Chinese labour.

Standard rates of wages, namely, 58 cents a day for men and 46 cents a day for women, were prescribed for Southern Indian labourers in the Raub, Lipis, Bentong and Temerloh districts of Pahang under section 141 of the Code. These rates came into force on the 1st of August, 1927. In other parts of the Federated Malay States, Indian labourers earn from 45 cents to 60 cents (men) and from 35 cents to 50 cents (women). Javanese and Malays earn from 50 to 60 cents a day and Chinese who are usually employed on contract (i.e., piece work) from 80 cents to \$2.10 a day according to the nature of employment.

The estate population for the past five years is shown in the following table:

—	1923.	1924.	1925.	1926.	1927.		Total.
					Males.	Females.	
Indians (of Madras Presidency) ...	121,463	119,242	137,761	176,114	114,770	57,696	172,466
Chinese ...	31,957	30,884	37,879	61,064	40,137	4,102	44,239
Javanese ...	4,791	4,516	4,165	4,760	3,478	1,072	4,550
Others ...	4,894	4,715	4,549	4,822	3,426	537	3,963
Total ...	168,105	159,357	184,354	246,760	161,811	63,407	225,218

Health conditions on estates generally have not been Health. unsatisfactory.

The mortality among Indian labourers differed little from that among labourers of other races, the death-rate per mille amongst labourers of all races on estates being 17.48 and amongst Indian labourers 17.44.

Under the Health Boards Enactment, which came into force on 1st January, 1927, a Central Health Board has been constituted which is empowered to collect an annual cess or cesses for the purpose of carrying out health measures in other than Sanitary Board areas and by the end of the year Local Boards under the control of the Central Board had been formed in all States except Perak and had begun to function. In order to co-ordinate the work of the Boards with the Labour Code the Controller of Labour is appointed ex-officio President of the Central Board. It is hoped that the supply of additional hospitals, the extension of medical supervision to all estates and the preparation of schemes for the improvement of unhealthy areas will by these means be facilitated.

Chinese immigration is uncontrolled and takes place Immigration. mainly through the ports of the Colony. The number of Chinese deck passengers arriving in the Colony reached the record figure of 359,262, while the number returning to China was 155,198. Large numbers of these immigrants proceeded to the Federated Malay States but in spite of this large influx there was little unemployment. Labour discharged from rubber estates was soon absorbed in other forms of employment.

The immigration of labourers from Southern India is regulated by the Indian Immigration Committee (of which the Controller of Labour is ex-officio Chairman) appointed by the High Commissioner.

The railway fares in India, steamer passages and transport expenses of such labourers to their places of employment are paid from the Indian Immigration Fund.

The number of labourers so assisted who arrived in Penang during 1927 was 123,826 compared with 149,414 in 1926. These "assisted labourers" consisted of 104,382 adults and 19,444 minors. Of the adults, 76,937 were men and 27,445 women: the number that proceeded to places of employment in the Federated Malay States was 77,863 compared with 99,660 in 1926.

The income of the Indian Immigration Fund is derived from a quarterly assessment levied on all employers of South Indian labour throughout Malaya based on the number of days' work done by such labourers during the quarter.

With a view to increasing the number of female immigrants a differential rate is levied on male and female labourers. The rate of assessment was fixed at \$5 for males and \$4 for females for the first and second quarters and at \$4 for males and \$3 for females for the third and fourth quarters of 1927, in respect of every 72 days' work done.

During 1927, 7,786 adult and 1,821 minor decrepit or destitute Indians were assisted with passages from Malaya back to India. Of these, 3,963 adults and 1,069 minors were from the Federated Malay States.

Amongst those repatriated at the expense of the Indian Immigration Fund, 1,135 adults and 516 minors had been inmates of the Home for Decrepit Indians, Kuala Lumpur, maintained by the Immigration Committee.

## XII.—MISCELLANEOUS.

### LEGISLATION.

During the year 1927, 27 Enactments were passed, of which 14 were amending Enactments and 13 consolidating or new Enactments. The more important amending Enactments were the Companies Amendment, which authorises companies to keep branch registers outside the Federated Malay States, the Excise Amendment, which by a control of the manufacture of liquor is designed to prevent the disposal of illicitly manufactured liquor, the Rubber (Restriction) Amendment, which prevents an accumulation of export rights, and the Mining Amendment, which authorised the imposition of conditions on a prospecting licence and ensures that the licensee should do his own prospecting and not evade his obligations by transfer. The most important principal Enactments passed during the year were the Town Planning Enactment, the Carriage of Goods by Sea Enactment and the Societies Enactment.

The Indian  
Immigration  
Fund.

Repatriation.

The Town Planning Enactment repealed the Town Planning Enactment of 1923, the failure of which was due to its complexity. The new Enactment makes the Sanitary Board the town planning authority and provides that the town plan now shall be limited to the main lines of communication, zones and open spaces. It does not deal at all with improvement schemes: a further Enactment will be considered in due course to deal with these.

The Carriage of Goods by Sea Enactment was passed following the Colonial Ordinance and the English Carriage of Goods by Sea Act, 1924, and consequently calls for no comment.

The most important provision in the Societies Enactment authorises the Resident to refuse registration of a benefit society if the proposed scheme of benefits appears financially unsound. It also authorises the Registrar to require any society to furnish accounts audited by an approved auditor. Where such accounts are not furnished or where the financial position seems unsound the society may be dissolved. A dissolved society must either register as a company or co-operative society in which case its accounts will still be subject to audit, or wind up its business.

The Machinery Enactment did not introduce any novel provisions and the Netherlands Indian Labourers' Protection Enactment did little more than re-enact the State Enactments as a federal measure.

None of the other Enactments passed call for special remark.

#### PLANTERS' LOANS BOARD.

On 1st January, 1927, the Planters' Loans Board had outstanding as "Planters" loans to four companies (\$288,500) and to eleven individuals (\$124,800) the sum of \$413,300. It lent in new loans (nine) during the year a further \$154,900, while five properties repaid their loans in full amounting to \$177,100 and four other properties made partial repayments amounting to \$21,700.

Planters'  
Loans.

At the end of the year, the "Planters" loans outstanding were \$369,400 to four companies (\$165,000) and fifteen individuals (\$204,400).

Under the extended powers given to the Board by Enactment No. 6/1926, the Board, during the course of the year, dealt with 89 enquiries and applications for loans for building purposes amounting in the aggregate to \$2,669,950.

Building Loans.



In 21 instances the applicants either did not proceed with their applications or withdrew them; 20 applications could not, for various reasons, be entertained by the Board, while five were still under consideration at the end of the year.

In all, 83 applications amounting to \$802,500 were definitely approved but up to the end of the year only 20 applicants had availed themselves of their loans amounting to \$408,000.

One borrower repaid his loan in full, \$20,000, while partial repayments (three) amounted to \$1,625.

At the end of the year, the Board had actually outstanding 19 building loans amounting to \$381,375.

War Service  
Loans.

Under the War Service Land Grant Scheme, at the beginning of the year, 103 ex-soldiers were benefiting by approved loans amounting to \$2,518,000.

No new loans were made during the year, while ten beneficiaries repaid their loans amounting to \$250,000.

Interest.

Interest earned during the year amounted to \$133,114, of which \$37,553 was in respect of "Planters" loans, \$2,893 in respect of "Building" loans and \$92,668 in respect of "War Service" loans.

Interest collected totalled \$202,362. Of this sum, \$125,127 was paid into Federal revenue and \$77,235 credited to the revenue of the Board.

Profit and loss.

The Board's profit on the year's working amounted to \$37,627.

Reserves.

The General Reserve Fund of the Board stands at \$525,000, while two special reserve funds of \$50,000 and \$40,000 respectively have been created, giving a total sum in reserve of \$615,000.

General.

The capital of the Board is \$4,000,000 created by "The Planters Loans Fund Enactment, 1915".

#### PUBLIC TRUSTEE.

The year under review was the fifth year of the working of the Department of the Public Trustee.

The duties of the Public Trustee are:

- (a) to act in the administration of estates of small value;
- (b) to act as an ordinary trustee;
- (c) to act as a trustee appointed by the Court.

During the year the Public Trustee accepted 80 trusts in all as compared with 18 in 1926 and 6 in 1925.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at about four million dollars.

## VOLUNTEERING.

During the year under review the strength of the Malay States Volunteer Regiment increased from 1,182 to 1,428, 416 recruits being obtained. This was most satisfactory as it brought the regiment to within measurable distance, for the first time in its history, of being up to establishment. Recruiting.

Equally satisfactory was the decrease in the average age of the members of the regiment, the number of men under 30 increasing from 465 to 583.

Efficiency showed great improvement, the figure of 100 per cent. efficient being reached by 14 different platoons and two whole companies, viz., "C" Company in Perak and "E" Company in Negri Sembilan. Efficiency.

Progress was made in all branches of training, the figure of merit for musketry rising from 60.3 to 65 and the number of first class Lewis gunners rising from 68 to 141. Training.

Two hundred and eighty-one volunteers went through the course at the School at Port Dickson as compared with 205 in 1926.

The progress of the Malayan Volunteer Infantry units was, on the whole, normal. Malayan  
Volunteer  
Infantry.

The Selangor Malayan Volunteer Infantry obtained good results at rifle meetings, attaining to second place in the Warren Shield Competition, open to all regular and volunteer units in Malaya, for the second year in succession.

## GENERAL.

His Excellency Sir Laurence Guillemard, G.C.M.G., K.C.B., who had been High Commissioner for the Federated Malay States over a period of seven years, retired in May.

The early stages of his period of office were marked by a serious world-wide trade depression which involved both the tin and rubber industries. The country, however, made a wonderful recovery: the period of depression was followed by years of unequalled prosperity and at the time of Sir Laurence's retirement the Federation was, generally speaking, in a very strong financial position, though it cannot be denied that the rubber industry, still subject to measures of restriction, gave cause for some anxiety.

He was succeeded in June by His Excellency Sir Hugh Clifford, M.C.S., G.C.M.G., G.B.E., who had spent a considerable period of his early Colonial service in Malaya. Sir Hugh's

pleasure at returning to the scene of his former labours was only equalled by that of all the communities in Malaya in welcoming him back. It was felt that his unrivalled knowledge of the country and his deep sympathy with all its peoples were inestimable assets.

During the short period between Sir Laurence Guillemard's departure and Sir Hugh Clifford's arrival Mr. W. Peel, c.m.g., Chief Secretary to Government, Federated Malay States, was Officer Administering the Government of the Colony and High Commissioner for the Malay States.

A visit was made to the States by the Flagship of the First Cruiser Squadron, China Station, H.M.S. "Frobisher", accompanied by H.M.S. "Dauntless".

His Majesty the King was graciously pleased to confer the following honours:

Knight Grand Cross of the  
Most Distinguished Order  
of St. Michael and St.  
George ... ..

Sir Laurence Guillemard,  
High Commissioner.

Companion of the Most  
Distinguished Order of St.  
Michael and St. George...

H. W. Thomson, British  
Resident, Perak.

Imperial Service Order ...

C. J. Perkins, Assistant  
Surveyor-General, Federated  
Malay States and Straits  
Settlements.

The new Certificate of Honour approved by His Majesty the King as a recognition of loyal and valuable services rendered to the Government of the Federated Malay States was awarded to the following on the occasion of His Majesty's birthday:

H. L. Velge;

Raja Mahdi bin Husin;

Towkay Chung Thye Phin, J.P.;

Syed Ahmad bin Syed Alwi;

Raja Ali bin Raja Haji Ja'afar;

Raja Chik ibni Yam Tuan Radin, Tunku Muda of  
Sri Menanti.

WILLIAM PEEL,

KUALA LUMPUR,  
10th May, 1928.

Chief Secretary to Government,  
Federated Malay States.

## FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
	₹	₹	Imports.	Exports.		₹		₹	₹	₹		
1889	5,013,000	4,091,078	15,653,456	19,720,689	28,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	424,213	424,213	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,700	38,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,451,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,128,974	...	...	511,287	1,844,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,284,189	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,999	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,990	38,402,581	60,361,045	43,111	7,050,362	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,873	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,668	...	...	801,959	3,605,029	786,116	1904
1905	23,954,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	60,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	887,797	1906
1907	28,793,745	20,225,993	52,542,277	80,598,196	48,429	9,395,925	905	97,752	1,701,683	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,256,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,290,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,689,498	50,126	10,729,868*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005	122,962,929	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935	161,838,118	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, \$409,394 and \$436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. \* A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,064, and in 1898 at 144,301; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. \* As now corrected. || Excluding bullion and specie.

## APPENDIX A—(cont.).

## FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(cont.).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
1916	51,121,856	31,966,581	69,621,113	219,943,686	43,870	7,903,785	62,813	3,851,815	3,068,706	11,616,006	1,903,177	1916
1917	65,553,186	40,378,746	73,261,725	271,485,389	39,833	9,331,298	80,022	4,914,761	3,398,464	13,183,530	1,944,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282	37,370	13,141,841	78,389	2,254,556	3,657,454	13,166,413	1,979,559	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,539	14,967,460	1,315,700	1919
1920	72,277,146	100,433,471	170,622,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,886,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,189	3,638,460	16,198,426	1,298,322	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	36,286	6,768,608	128,461	802,390	3,731,041	13,816,394	1,360,876	1922
1923	63,952,132	52,835,572	89,068,237	197,100,950	37,650	8,245,196	101,311	4,664,374	3,919,900	14,675,106	1,360,667	1923
1924	70,715,407	54,161,234	97,436,302	212,834,740	44,043	12,543,624	93,507	4,228,677	4,136,332	16,210,202	1,418,456	1924
1925	80,664,279	69,550,362	137,116,207	411,878,610	46,936	13,968,667	107,178	8,667,701	3,953,682†	18,743,362	1,447,943	1925
1926	102,541,400	87,663,747	173,887,734	445,600,263	45,947	15,604,582	160,213	11,193,115	5,369,042	21,640,545	1,476,033	1926
1927	105,404,468	93,263,915	176,161,194	339,925,603	52,179	17,704,590	137,602	8,571,987	6,656,794	23,065,515	1,504,583	1927

¶ Excluding bullion and specie.

§ A census of the population was taken in 1891, 1901, 1911 and 1921.

1899 at 194,801; that of Selangor in 1884 at 46,548 and in 1887 at 87,104. No figures for the other States are given prior to 1891.

† The figures for previous years included items now omitted owing to reclassification of revenue.

## APPENDIX B.

STRAITS SETTLEMENTS STEELING LOAN CAPITAL ACCOUNT TO  
31st DECEMBER, 1927.

Cr.

	\$	c.	\$	c.	\$	c.	By Loan Subscriptions—	\$	c.
Interest on Deferred Instalments, 6 per cent. Loan ...	268,092	28					(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714	29
Interest on Deferred Instalments, 4½ per cent. Loan ...	110,958	96					(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000	00
Composition Stamp Duty, 6 per cent. Loan ...	552,321	42	379,051	24					
Composition Stamp Duty, 4½ per cent. Loan ...	360,000	00							
			912,321	42					
Discount on Issue Price, 6 per cent. Loan ...	1,325,571	43							
Discount on Issue Price, 4½ per cent. Loan ...	1,800,000	00							
			3,125,571	43					
Underwriting Commission, 6 per cent. Loan ...	441,857	14							
Underwriting Commission, 4½ per cent. Loan ...	360,000	00							
			801,857	14					
Commission for obtaining Underwriting, 6 per cent. Loan ...	110,464	29							
Commission for obtaining Underwriting, 4½ per cent. Loan ...	90,000	00							
			200,464	29					
Crown Agents' Commission, 6 per cent. Loan ...	110,464	29							
Crown Agents' Commission, 4½ per cent. Loan ...	90,000	00							
			200,464	29					
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan ...	108,049	28							
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan ...	89,355	00							
			197,404	28					
Miscellaneous—Stamps, etc., 6 per cent. Loan ...	5,873	21							
Miscellaneous—Stamps, etc., 4½ per cent. Loan ...	4,475	18							
			10,348	39					
Advertisement, 6 per cent. Loan ...	31,052	18							
Advertisement, 4½ per cent. Loan ...	29,630	03							
			60,682	21					
To Loan Works—Public Works Department ...	20,379,955	48			5,885,164	69			
Posts and Telegraphs Department ...	2,380,848	81							
Topographical Survey Department ...	763,402	66							
Topographical Survey of Forest Reserves ...	67,063	83							
Railway—Open Lines ...	5,305,641	26							
„ Construction ...	34,384,947	37							
					63,281,859	41			
To Balance ...	...				11,015,690	19			
					\$80,185,714	29			
								\$80,185,714	29

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# CYPRUS.

## ANNUAL REPORT FOR THE YEAR 1927.

### PREFATORY NOTE.

#### Geography.

The island of Cyprus, situated in the eastern Mediterranean between  $34^{\circ} 33'$  and  $35^{\circ} 41'$  N. latitude and between  $32^{\circ} 20'$  and  $34^{\circ} 35'$  E. longitude, is about 140 miles in greatest length from east to west and about 40 miles in greatest breadth from north to south. A narrow range of limestone mountains, with an average height of 2,000 feet, extends along the northern coast, and an extensive group of mountains, culminating in Mount Troödos, 6,406 feet above the sea, fills the south-western part of the Island. Between these ranges lies the fertile Messaoria plain.

Cyprus is most easily reached via Port Said, from which it is distant at the nearest point 240 miles. The crossing from Larnaca on the south-east coast to Beirut in Syria is accomplished in a night, and the strait between the north coast and the southern shores of Asia Minor is at Kyrenia 45 miles wide.

#### Climate.

The climate of Cyprus is, generally speaking, temperate and healthy, though the excessive heat of the plains during the summer is trying to Europeans. The heat is, however, dry, except on the coast, and the winters are cold and invigorating. There are numerous resorts in the hills at altitudes varying from 6,000 to 2,000 feet, such as Mount Troödos or Kantara, where the summer season, lasting from June to the end of September, can be passed in eminently healthy surroundings and without discomfort or inconvenience. On Troödos during the 1927 season the maximum shade temperature was  $91^{\circ}$  F. and the minimum  $48^{\circ}$  F.

The absolute mean temperature for 1927 at Nicosia was  $66.5^{\circ}$  F., as against  $66.7^{\circ}$  F. for 1926, and the average of  $66^{\circ}$  F. for the last fifteen years. The mean maximum temperature during the year was  $79.2^{\circ}$  F., as against  $78.5^{\circ}$  F. for 1926, and the mean minimum temperature was  $55.9^{\circ}$  F., as against  $54.9^{\circ}$  F.

The rainfall for the last ten years has averaged 20.33 inches per annum. The mean rainfall for the year was 16.81 inches, as compared with 28.19 inches for 1926.

Twenty-two earthquake shocks were recorded during 1927; with one exception, they were all felt in Limassol. Two of the shocks were classified as "severe", and occasioned a certain amount of damage to buildings.



### History.

Cyprus was a centre of Aegean civilisation 2,000 years before the Christian era, and Greek and Phoenician colonies were established there at a very early date. It would appear indeed to have been colonised in the Mycenaean age, and probably was used as a base for those assaults by the Achaeans on the power of Egypt and of the Hittites, which took place in the century before the Trojan war. In the sixth century B.C. the Island was conquered by Egypt, and later absorbed into the Persian Empire. Evagoras, a native-born king, succeeded in the fifth century B.C. in raising Cyprus to a position of independence, but on his death it again fell to the power of Persia, and in due course to Alexander the Great. At the division of Alexander's empire, Cyprus passed to Egypt, until in 58 B.C. it became a Roman province, falling, on the division of the Roman Empire, under the rule of the Byzantine emperor.

In A.D. 1184 the Governor of Cyprus, Isaac Comnenus, revolted and maintained his independence until 1191, when Richard Coeur de Lion of England, on his way to the Crusades, landed, and in a sharp campaign of a few weeks conquered the Island. Richard sold it to Guy de Lusignan, the "King of Jerusalem," and the Lusignan dynasty ruled the Island until A.D. 1489, although from 1378 to 1464 the Genoese Republic exercised a suzerainty over a part of the kingdom. In 1489 Cyprus fell to the Republic of Venice, who held it until it was wrested from them by the Turks in 1571, in the Sultanate of Selim II.

In 1878 the Island passed under the administration of Great Britain, and, on the outbreak of war with Turkey in 1914, was annexed to the British Crown by Order in Council of 5th November, 1914. The annexation has been formally recognised by Turkey under the Treaty of Lausanne, which was ratified on the 6th August, 1924.

In 1925, Letters Patent giving to Cyprus the status and name of a Colony and constituting the office of Governor of the Colony in place of that of High Commissioner were passed under the Great Seal of the United Kingdom, dated the 10th of March.

### Historical Remains.

Cyprus is very rich in archaeological and antiquarian interest, of the preclassical, classical, Lusignan, and Venetian eras.

In 1927 further progress was made with the excavation of the great Fourth Century church at Salamis, the Arablar Mosque at Nicosia was repaired, and a building at Nicosia, itself of considerable archaeological interest, was set aside for the reception of pieces from mediaeval ruins.

**Languages.**

The language of the country is a local dialect, often very corrupt, of Modern Greek. Osmanli Turkish, somewhat archaic and free from Persian and Arabic words, is spoken by the Moslems, who, however, as a general rule, are conversant with Greek. In a less degree, French is spoken by the more educated classes. The knowledge of English is rapidly becoming more widely diffused, and, save in the most remote villages, there is usually to be found someone who can speak and even read and write it.

**Population.**

The population of Cyprus, as shown in the census return taken in 1921, was 310,709, and the estimated population at the end of 1927 was about 339,500. Nationality in the Near East is somewhat difficult of definition and is inseparably linked up with religion. Cyprus is a land of many creeds, and in differentiating sociologically between the varied elements of the population it is easiest to follow these natural lines. The bulk of the inhabitants of the Island are of the Orthodox Greek-Christian faith and belong to the Autocephalous Church of Cyprus. Of the remainder, some 65,000, or approximately one-fifth of the population, are Moslems. There is also an Armenian community, which tends steadily to increase, and a distinct though not numerous Latin colony.

**Currency.***Paper:—*

£5, £1, and 10s. currency notes.

*Gold:—*

£1. The Cyprus £1 is equal to the pound sterling.

*Silver:—*

18-piastre piece.

9-piastre piece. (= 1 shilling. There are 20 shillings to the £.)

4½-piastre piece.

3-piastre piece.

*Copper:—*

Piastre.

Half-piastre.

Quarter-piastre.

**Weights and Measures.***Capacity.*

2 pints = 1 quart.

2½ quarts = 1 Cyprus litre.

4 quarts = 1 gallon.

8 gallons = 1 kilé.

9 quarts = 1 kouza

16 kouzas = 1 load } Liquid measure.

*Weight.*

400 drams	=	1 oke.
1 oke	=	2 $\frac{1}{3}$ lb.
1 $\frac{1}{3}$ okes	=	1 Cyprus litre.
5 okes	=	1 stone.
44 okes	=	1 kantar.
180 okes	=	1 Aleppo kantar.
800 okes	=	1 ton.

*Length.*

12 inches	=	1 foot.
2 feet	=	1 pic.
3 feet	=	1 yard.
33 pics	=	1 chain.
2,640 pics	=	1 mile.

*Land Measure.*

1 donum	=	60 pics — 40 yards square — 1,600 square yards — 14,400 square feet — $1\frac{4}{11}$ of an acre.
1,936 donums	=	1 square mile.
3.025 donums	=	1 acre.

**I.—GENERAL**

The outstanding event of the year was the decision of His Majesty's Government to relieve Cyprus of the whole of its share of the Turkish Debt Charge by increasing to £92,800 the previous annual grant-in-aid of £50,000, and the conclusion of an agreement by which the Colony undertakes in return to contribute £10,000 per annum towards Imperial Defence. The financial effects of this arrangement, due to come into force as from the 1st January, 1928, will be apparent in 1928.

The Cyprus Public Library, to which Her Majesty the Queen graciously presented fifty volumes from Her Majesty's private collection, was opened by the Governor on the 1st July. Attached to the Public Library is a small inter-departmental circulating library containing books in five languages for the use of officers at out-stations.

The Cyprus Museum was enriched by Sir J. Duveen's generous presentation of a portrait, from the School of Bellini, of Queen Caterina Cornaro, the last queen of Cyprus; by an heroic bronze statue of the Emperor Septimius Severus discovered at Kythraea; and by the results of the Crown Prince of Sweden's excavations directed by Professor E. Gjerstad at Lapithos and Soli, shortly to be put on exhibition.

A Medical Society and a Chamber of Commerce were established, and a School of Music founded.

Two men of distinguished memory, whose careers were closely connected with Cyprus, received posthumous honours. On the 24th June a tablet in memory of Lord Kitchener, in the wall of the house at Nicosia occupying the site where his house stood, and on the 5th November a monument to Kiamil Pasha, in the courtyard of the Arab Achmed Pasha Mosque at Nicosia, were erected and unveiled by the Governor.

## II.—GOVERNMENT FINANCE.

The totals of revenue and expenditure for the last five years are :—

Year	Revenue.	Grant-in-Aid.	Total.	Expenditure.	Share of Cyprus of Turkish Debt Charge.	Total.
	£	£	£	£	£	£
1923 ...	567,389	75,000	642,389	582,699	92,800	675,499
1924 ...	593,318	50,000	643,318	535,870	92,800	628,670
1925 ...	668,131	50,000	718,131	619,622	92,799	712,421
1926 ...	629,266	50,000	679,266	655,227	92,800	748,027
1927 ...	655,997	50,000	705,997	615,029	92,800	707,829

The considerable decrease in the revenue referred to in the report for 1926 has been substantially repaired and the revenue in 1927 was £26,731 more than in the preceding year. The expenditure was £40,198 less than in 1926. The general results of the year compared with 1926 are extremely favourable. In the former year there was a deficit of £68,761 on the year's working, while in 1927 there was but a slight deficit of £1,832.

The increase in revenue is attributable to an increase in Customs receipts of £54,739, due mainly to the increased duties imposed in February, 1927. Further additional revenue was received from Harbour and Wharfage Dues, due to increased shipping; Defter Hakani, due to increased Land Registration Department transactions; Excise tobacco duties and spirit duties, due to the effect in a full year of taxation imposed in February, 1926; Salt, due to increase in price; Court fines, due to increase in number of summary convictions.

The only significant decreases in the revenue occurred under Tithes, on which nothing was received in the year under review, owing to the abolition in 1926 of this source of revenue. There were small decreases under Interest on Government Moneys, due to lower level of the Note Security Fund; and under Forest Revenue, due to less expenditure on extraction of Forest Produce.

Increases in expenditure appear under Charges on Account of Public Debt, due to the cessation of the contribution from the Locust Destruction Fund; under Pensions, due to additional pensioners; under Customs Department, due to various staff changes;

under Legal Departments, due to their reorganization ; under Medical Department, due to the establishment of a venereal clinic, inspection by Colonial Office Medical Adviser, and a more intensive campaign against malaria ; under Education, due to an increased grant to elementary schools ; under Agricultural Department, due to generally increased activities ; under Public Works Extraordinary, due to artesian borings, extension of Nicosia hospital, and completion of Kyrenia Konak.

Decreases in the expenditure were observed under the Treasury, due to the abolition of tithes ; under Railway Department, due to decreased expenditure on material ; under Public Works Annually Recurrent, due to reduced expenditure on roads and Government buildings ; and under Miscellaneous Services, due to reduced expenditure on stationery.

The balance of assets over liabilities on the 31st December, 1927, exclusive of the Reserve Fund of £90,000 and the depreciation account on investments of the Reserve Fund and Savings Bank, amounted to £45,050, as against £45,990 at the 31st December, 1926.

Currency notes of £5, £1, and 10s. were in circulation throughout the year, the former note being first circulated in February, 1927, to replace the £10 note demonetized as the result of a report that they were being forged. The maximum amount of the currency note issues is still limited to £700,000 and the maximum value of notes actually in circulation at any one time during 1927 was £541,923 on the 14th October.

Steps were taken to adjust a shortage of copper which manifested itself, and copper coins to the nominal value of £1,000 were received during the year. Of this total, £700 was actually placed in circulation.

The amount of the Public Debt due in its entirety to the Imperial Treasury was originally £314,000, £60,000 having been incurred on Irrigation Works and £254,000 in connection with Famagusta Harbour and the Railway. The Irrigation loan is repaid by yearly instalments of £2,400, which is applied in paying 3 per cent. interest on the amount of the loan outstanding, the remainder going towards repayment of capital. At the end of the year the amount outstanding was approximately £38,308. The other loan is extinguishable by equal repayments of capital on the annuity system at  $3\frac{1}{4}$  per cent. for 50 years. The amount outstanding at 31st December, 1927, was £142,130.

### III.—PRODUCTION.

#### Agriculture.

Agriculture is the Cypriot's main occupation and his chief source of wealth. The majority of the population consists of peasant proprietors or tenants, farming the land themselves. Farms on a larger scale, known locally as chiftlics, exist ; it is, however, on

the peasant proprietor or smallholder that the agricultural prosperity of the Island has hitherto depended. About one-half of the total area of Cyprus is under cultivation, and about one-fourth of the remainder is susceptible of cultivation.

The cereal harvest for the year under review was good, and high prices were obtained for oats and barley. Both for cereals and for olives, which were abundant, the weather conditions were favourable, and the incidence of disease was much less marked in either case than in 1926. The carob crop was of average size, but of rather poor quality. Prices, however, were excellent. Investigations were pursued with a view to combating the disease, *brachycarpia*, which causes much damage to the crop, and the annual campaign against rats, which attack the trees, was carried out satisfactorily.

The grape harvest was successful, and the production of wines again showed a large advance on the previous year, though there was a certain decrease in spirits. The Perapedhi wine and spirit factory did good work during the year, and is expected to extend its operations further. Lectures and demonstrations in the raising and treatment of vines were given by the Government expert, as a result of whose efforts considerable progress in viticulture is to be observed. Arrangements were also made for the importation from Greece and Crete of supplies of cuttings, grafts, etc., in order to introduce into Cyprus the cultivation of the table grape, at present not grown in the Island.

Owing to the insufficient rainfall, less cotton was sown and produced than in 1926. The quality of the crop was, however, good, and favourable prices were obtained. Samples of cotton grown in Cyprus were submitted to the Empire Cotton Growing Corporation and well reported on.

The fruit crops were again very satisfactory and large quantities were sent for export. It is generally recognised that the Cyprus oranges compare favourably with those of Jaffa, and, as the demand grows, each year more land is devoted to their cultivation.

The potato crop for the year, mostly grown from imported seed, was satisfactory, though the summer crop was considerably damaged by *Lita Solanella*. Both area under cultivation and production were larger than in 1926, and the export trade was good.

#### AGRICULTURAL PESTS.

Campaigns were conducted against locusts, which appeared in unusually large numbers, hornets, and sparrows, as well as against the codlin moth (*Cydia Pomonella*), the almond maggot (*Eurytoma Amygdali*, End.) and the two cotton boll worms (*Platyedra Gossypiella*, Saund. and *Earias Insulana*, Bois). Fumigations and sprayings of citrus trees against scale and fly were carried out by the Agricultural Department, which also arranged for the fumigation at the port of export of oranges destined for exportation.

## AGRICULTURAL EXPERIMENTS AND EDUCATION.

Experiments in the cultivation of flax were continued with good results. The area under cultivation and the crop were smaller than in 1926, but the quality of the flax was good, and satisfactory prices were obtained for that shipped to England.

Except at Paphos, little work was done in the flax scutching industry. The Limassol factory was destroyed by fire and that at Zodia was inactive until, at the end of the year, it was placed under new management.

Briquettes were again made from flax straw, and the Imperial Institute reported on the samples submitted that they compared well with certain of the lower-grade fuels.

Hemp is grown in the Paphos district on a small scale, but until recently the general methods of cleaning and handling rendered it unsuitable for the European market. In 1927 a sample was prepared under the directions of the Department and favourably reported on by the Imperial Institute. Particular attention is to be devoted in future to the development of hemp production.

The departmental leather-curing factory, installed in 1924, with the object of encouraging the local tanners to produce a better class of leather, continued to produce skins much appreciated by the public. Various skins submitted to the Imperial Institute for examination were satisfactorily reported on. The example of the departmental factory has had a beneficial effect on the industry, and local tanners are now ordering modern machinery. Four chrome-leather plants were at work in Nicosia during 1927, and an up-to-date tannery was established at Larnaca. During the year, the Department started the manufacture of gloves.

The cultivation of tobacco was largely extended and production greatly increased. Considerable impetus to production has been given by the establishment at Nicosia of the office of an English company of importers. The Department continued to give expert advice to cultivators with a view to improving the quality of the tobacco produced.

For many years the Agricultural Department has been endeavouring by both precept and example to induce the local farmers to adopt modern and scientific methods. These efforts are now beginning to have a noticeable effect, and it may be affirmed that the era of agricultural stagnation in Cyprus is approaching its end. The use of chemical fertilisers and of up-to-date machinery is spreading rapidly; there is an increased demand for expert advice on the cultivation of crops; a growing interest is observable in the planting of fruit trees; and scientific measures for the prevention of damage by disease and insects no longer meet with the same degree of distrust.

Lectures and demonstrations, which were well attended, were given by the Entomologist, the Viticulturist, and other members

of the staff, and pamphlets of agricultural interest were distributed to the farmers. The *Agricultural Journal*, a quarterly publication produced under the auspices of the Department in English, Greek, and Turkish, again enjoyed a much augmented circulation in 1927.

There were 266 model orchards and vineyards and experimental plots in existence in 1927, as against 175 in 1926. The interest taken in them by the villagers is in every way satisfactory, and many more experimental plots were offered to the Department by private persons than could in the circumstances be dealt with. There were also eight Nursery Gardens, to which more are to be added in order to cope with the demand for seedlings, cuttings, etc.

The scheme to encourage the cultivation of gardens by village school-children by means of official visits of inspection and the award of prizes has become an established feature of the Department's activities. One hundred and fifty-six school gardens were in operation in 1927, as against 131 in 1926, and arrangements have been made to start many more. Large quantities of seedlings and plants were issued free of charge and the gardens were well stocked. Arbor Day was celebrated as usual.

During the year under review, 27 students studied at the Agricultural School at Nicosia. Forty applications for enrolment were received, but of these all except ten had to be rejected. Nine students passed the final examinations. One officer of the Department was sent to the Imperial College of Science in London to study entomology.

### Stock Breeding.

At Athalassa, three miles from Nicosia, the Government possesses a large stock-farm, which is under the supervision of a resident manager who is also a member of the Cyprus Stock Committee, a body which advises the Government on all matters connected with stock breeding. At this farm, stock is raised for sale throughout the country, and, in addition, thoroughbred stallions, donkeys, bulls, and boars stand for service at nominal fees. There are also subsidiary stud-stables, which are controlled from Athalassa, in outlying districts. Various types of poultry are bred in large numbers, and these, as well as eggs for hatching, are sold in different parts of the Colony. Auction sales of stock reared on the farm were held at Nicosia and other centres in 1927 as usual.

During the year, the following services were effected by the stud animals :—

At Athalassa :—

Mares, 118; donkeys, 45; cows, 150; sows, 41;

and in the districts :—

Mares, 445; donkeys, 238; cows, 321; sows, 652.

One new district stud-stable was built at Ayios Theodoros. Other district stud-stables are at Famagusta, Yialoussa, Larnaca, Polis, Paphos, Vati, and Lefkoniko.



The farm lands at Athalassa, amounting in all to some 1,800 acres, were again under cultivation for the production of cereals, lucerne, etc. Labour was plentiful, the reformatory, run in connection with the farm on the lines of a Borstal Institution, as described elsewhere in this report, making available a daily average of 53 youths throughout the year. There is a good water-supply on the farm all the year round, and reafforestation has been undertaken in the less fertile parts of the property.

Cyprus animals, in particular mules and donkeys, are highly prized abroad on account of their powers of endurance and of their immunity from those diseases which are most common amongst animals in the Near East. Interest in the breeding of horses of good stock is kept alive by the annual races which take place every spring and autumn.

Every endeavour is being made to maintain and enhance the high reputation which Cyprus poultry and eggs have acquired in recent years in Egypt and the Levant. The improvement in the native birds caused by the introduction of breeds from England has been greatly appreciated and an excellent grade bird has been obtained. Especially is this the case with turkeys, English cock-turkeys being used for breeding purposes in the districts.

A poultry show is now held regularly in conjunction with the annual agricultural show. There is keen rivalry amongst competitors for prizes, and the number of pens privately exhibited increases yearly.

Of the breeds so far introduced into Cyprus the Rhode Island Reds imported in 1925 now appear to be the most successful and popular. Croad Langshans take second place, and fair results have been obtained from the Light Sussex imported with the Rhode Island Reds in 1925.

### **Veterinary Services.**

The Veterinary staff is under the supervision of a qualified Veterinary Surgeon, who is assisted by two Inspectors, graduates of the Veterinary Schools of Cairo and Constantinople, and a Compounder. A temporary staff of Vaccinators is employed when required.

A scheme for the reorganization and extension of the work of the Veterinary branch from 1928 onwards has been adopted. The stock-owners are taking a keener interest in the health of their animals and in their protection from the ravages of disease, which accounts annually for losses valued approximately at £20,000. This revival of interest is due to the unflagging energy of the Veterinary staff, who are gradually succeeding in rousing the villagers from their apathy to a sense of the importance and advantage of taking prophylactic measures.

Over four hundred visits were made by the Veterinary staff to town and village areas for the purpose of inspecting stock, investigating disease, and giving lectures or demonstrations. In addition to these, 122 visits to village areas were made by temporarily engaged men. The diseases under notice included anthrax, black quarter, contagious bovine abortion, strangles, tetanus, stomatitis of sheep, gangrenous mastitis of sheep and goats, mange, tuberculosis, parasitic bronchitis, and gastro-enteritis.

During the first half of the year, climatic conditions were favourable for stock raising, and the health of the animals was satisfactory. Reports of disease were much more numerous in the second half of the year. The late arrival of the winter rains caused stock of all kinds, and in particular sheep and goats, to suffer severely from lack of food. In November and December sheep and goats had become so reduced in condition that they became a ready prey to parasitic infection.

Forty-one outbreaks of anthrax were reported, as compared with sixty-one in 1926. The prevalence of this disease in the Island is becoming increasingly evident as the stock-owners are being taught the desirability of reporting outbreaks and of immunising their animals. More attention is now paid to the Order under the Contagious Diseases (Animals) Law, which contains regulations as to the reporting of illness, the disposal of carcasses, and the ante-mortem inspection of animals slaughtered for human consumption in areas declared to be infected with anthrax. The eradication of the disease will, however, be impossible until these regulations are scrupulously complied with in every case.

The work of vaccinating stock in infected areas was considerably extended. Approximately 56,000 animals were immunised, as compared with 70,000 in 1926 and 25,000 in 1925. In the early part of the year both double and single vaccines were employed, but the use of the former was later discontinued, as it was followed to an embarrassing extent by post vaccination accidents. The number of animals vaccinated in the various classes was as follows:—Equines, 937; bovines, 1,363; sheep, 30,027; goats, 23,525; pigs, 61.

Black quarter was reported from eleven areas, as compared with 19 in 1926. The mortality was not heavy, 26 animals having died of the disease as against 103 in 1926. Immunisation with black quarter vaccine in pill form was applied to 262 cattle, as compared with 664 in 1926.

Tuberculosis which had been present in dairy cattle of imported breeds appears to have been brought effectively under control. Of 148 animals subjected to the tuberculin test during 1927 there were only two reactors, which were exported for slaughter. No case of tuberculosis has occurred amongst the native cattle.

At the close of the year, there were 50 premises registered under the "Milk and Dairies Sale of Food (Milk) Regulations, 1926."

These were frequently inspected and the regulations enforced as far as possible. In view of the expense connected with structural alterations, some time must elapse before all the requirements of this nature can be fulfilled in all registered premises; progress, however, has been satisfactory.

### Forestry.

At one time Cyprus was famous for its forests. During the Turkish administration, when their value was not appreciated and the science of silviculture not understood, they gradually declined, and a visitor to the Island in the 'seventies was horrified by the spectacle of desolation which they presented. Since the British occupation in 1878 there has, however, been a considerable improvement and artificial reafforestation has been carried out as far as funds have permitted. In the late war the forests of Cyprus were of great service to the allied armies in Egypt and Palestine, which they supplied with a large proportion of their needs in the way of timber and fuel.

The total area of the delimited State forests, comprising practically all the forests in the Island, is now estimated at 406,577 acres, and the total length of the forest boundaries is over 1,854 miles. During the year, great progress was made with the enumeration and topographical survey of the forests, the latter of which, when completed, will put an end to disputes concerning boundaries. The Stock map survey was also commenced. The principal species of trees grown are the Corsican and Aleppo pine, juniper, plane, dwarf oak, alder, and cedar, and, in the plantations, acacia, eucalyptus, and pine. The forests supply the local needs for fuel and in part for timber, but endeavours to open up markets for Cyprus timber abroad have hitherto been unsuccessful on account, it would appear, partly of its knotty quality as compared with that grown in Scandinavia and America, and also of the relatively high cost of production. In the Island the cost and difficulty of transport cramp the local market. It must, however, be borne in mind that though the exploitation of the forests on a commercial scale would be desirable, the indirect benefit derived from them in a country which, like Cyprus, lacks a plentiful water supply is enormous. They both increase the rainfall and help to preserve the humidity of the soil.

The general condition of the forests was not entirely satisfactory, owing to the increasing depredations upon firewood and timber trees due to the great demand for wood and to lack of respect for the forests on the part of the peasantry.

The year, a comparatively dry one, was unfavourable to natural reproduction. A good deal of damage was caused by fire, but none by lightning. Snowbreak, a rare kind of forest damage in Cyprus, occurred in Kantara forest in February.

The depredations of the caterpillar of the processionary moth appear to be stationary, decreasing in one place and increasing in another. The scheme for dealing with this pest, i.e., by forming a trap area containing a few trees, is still in the experimental stage. The old system of clearing the trees from these pests was again put in hand this year, on a small scale.

As less than half the funds provided in the previous year were available for reafforestation, plantations could only be partially kept up. The sowing by tractor continued, and an area of 233 acres of bare land was sown. The reafforesting of burnt areas was also continued, and 1,038 acres of bare land was sown by hand.

Repair planting on roadsides was carried out for nearly 10½ miles. 731 new tree guards were made to protect the young trees from animals. Repairs to fences were made over a distance of 56 miles at a cost of 3s. per acre. The draining and reafforestation of the freshwater lake at Famagusta was continued on a small scale with prison labour. Irrigation was improved by the installation of an engine and pump in the Varoshia plantation to enable the watering of this accessible young forest to be undertaken, as well as the introduction into it of more valuable species of trees. In addition, 12 new wells were sunk and 1 new air motor erected, which are of great use in the process of conveying the water from the wells through pipes and irrigation channels to the plantations and nurseries. 152,482 seedlings were distributed to private persons for planting in their properties.

The first two Cypriots sent to England returned to the Department after two years' training in the Forest Apprentices School, Forest of Dean. Since then they have proved invaluable to the Department and have already well repaid the cost of their training.

There were 128 forest fires during the year, of which only one was of a serious nature. It occurred in the Troódos forest near the Messapotamos Monastery. The forest telephone system was extended from Stavros to Poli in the Paphos forest. Some 37½ miles of new fire traces were constructed, and 91 miles of old ones cleared.

Financially the year showed a slight decrease of departmental revenue as compared with the previous year, £11,228 as against £12,800. Very little exploitation work was carried out in the forests and sawmills owing to the limited funds available for this purpose.

One of the most difficult problems with which the Forest Department has to deal is the presence of goats, of which there is a very large number in the Island (225,581). These animals do an incalculable amount of damage both directly by eating the younger trees and indirectly by loosening the earth on the steep mountain sides where they roam. In this way the annual increment of growth is enormously diminished. Of late years the problem has

become very serious because, as more arable land is brought under better cultivation and closed to nomadic grazing, the goats tend to move towards the forests. Efforts have been made to minimise the damage done, by issuing permits for the grazing of limited numbers of goats in certain defined areas; and this method has undoubtedly had some success in reducing the number of animals grazing in the forests. The Agricultural Department, at the urgent request of the Forest Department, is trying to import a better breed of milking goat from Spain, which will be given under certain conditions to shepherds and kept under a proper agricultural system. Also these will be bred with local goats. If this experiment proves satisfactory, the shepherds will be supplied with more animals in exchange for their goats, provided that they will agree to keep them tethered in small holdings.

Nevertheless it is impossible without a large staff of guards entirely to prevent illicit grazing, and the system of issuing permits itself can only limit without abolishing the mischief. It is, however, obviously impracticable at once to eliminate goats from Cyprus, and this system must be maintained, while at the same time efforts are made to induce the goatherds to abandon the keeping of goats for an agricultural life, or else to remove to a part of the Island where their presence is not injurious. A few persons have already moved at the expense of the Forest Department, but the process is bound to be gradual and extend over several years.

The Committee appointed during the last year to enquire into the present forest policy of the Government continued its investigations throughout the year under review.

### **Mining.**

The interest and activity displayed in mining during 1927 were well up to the standard reached in previous years. Thirteen new prospecting permits were issued, and in the larger mines already being exploited very good work was carried on.

The Cyprus Mines Corporation at Skouriotissa and Mavrovouni, which now ranks in the matter of output high in the order of the world's pyrites workings, continued and extended its operations during the year. Approximately 200,176 tons of cupriferous iron pyrites ore were mined and 208,122 tons shipped for exportation, a considerable increase on the figures for the preceding year. The Corporation maintains its own railway line, as a branch of the Government Railway, from the mines to the sea, from which they are about five miles distant. Here it has constructed a pier with all facilities for expeditious handling and shipping of the ore, and, in the neighbourhood, a new crushing and screening plant together with yards, etc., for the storage of the ore. This new installation, erected at a cost of some £10,000, commenced operations in March, 1927. At Mavrovouni, the exploration work

having given satisfactory results, a commencement was made with the programme of development. Great attention is paid by the Corporation to the conditions under which the labourers live and work, and conditions underground were greatly improved during the year. In particular, a new compressor is being installed which is calculated to supply over 40 cubic feet of free air per person per minute.

The Cyprus Asbestos Company spent a further sum of £102,750 on constructional work and largely increased its output. The amount of asbestos rock mined reached close on  $1\frac{1}{2}$  million tons, an increase of over  $\frac{3}{4}$  million tons on the figures for 1926. The amount of finished asbestos produced, 11,200 tons, was 5,000 tons in excess of the production for 1926. Prices for asbestos remained firm, and labour was plentiful throughout the year.

Early in the year several eminent mining engineers and geologists visited the Island and were unanimous in the opinion that the mineral-producing potentialities of Cyprus were worthy of more serious investigation. The question of undertaking a comprehensive mineralogical and geological survey of the Island is engaging the attention of the Government.

The Government Inspector of Mines visited and advised upon several of the prospecting claims, and the Government takes every precaution to ensure that they are properly and seriously exploited.

### **Sericulture.**

Cyprus is the second most important silk-producing country in the British Empire, and the rearing of silkworms has for many years been an important and growing local industry. The principal centres are Nicosia, Paphos, and the Carpass division of the Famagusta district, where the white mulberry tree is extensively cultivated for the breeding of silkworms. Special attention is paid by the Government to the industry, which is under the close supervision of the Agricultural Department, and egg-raising for reproduction purposes is permitted only by special licence to a limited number of persons and is subject to periodical inspection.

The possibilities of development afforded by this industry first attracted the notice of the Committee of the Imperial Institute in 1916. It was immediately appreciated that there were many obvious advantages to be obtained by reeling the silk locally instead of allowing all the cocoons to be exported to France and Italy, and after a series of practical trials and experiments conducted under the auspices of the Institute the Cyprus Silk Filature was established at Yeroskipos in 1925 under British management. Operations were commenced on 25th March, 1926.

Yeroskipos is situate near Paphos 100 miles from Nicosia and 45 miles from Limassol port, on the main road connecting Paphos with these two places. It possesses an ample supply of water, of

which the quality has been proved to be eminently suitable for silk reeling. The main building of the Filature consists of the large reeling hall; the room where the silk is examined; the engine-room and boiler-house; the accumulator room; and the office and cocoon-issuing room. In addition, there are a large store for the cocoons, a reservoir with a capacity of 150,000 gallons, a drying shed, and three houses for the manager and staff.

The Filature at present consists of 80 reeling basins at each of which eight skeins can be reeled at once, but the plant has been so designed as to render duplication simple and economical. These 80 basins can cope during the year with about 370,000 lb. of "fresh" cocoons. The present production of Cyprus amounts to about 450,000 lb., but there is a local rough-reeling and weaving industry which absorbs a large proportion of the excess. During 1927 the Filature worked 272 days and produced about 130 lb. of silk daily.

A feature of the 1927 crop was the excessive price paid for cocoons. In spite of a dull and falling market, merchants offered strong competition in the buying of cocoons, first against the Filature and later between themselves. Throughout the latter half of the year the market continued to fall and in the autumn the majority of the merchants decided to liquidate their losses.

The establishment of the Filature has undoubtedly had an excellent effect. Not only do the peasants benefit by receiving somewhat better prices for their cocoons, but also they are encouraged to use modern methods of rearing the worms and producing the cocoons, so that the quality is greatly improved, and the quantities of cocoons obtained increased. The cultivation of mulberry trees is developing rapidly, and in 1927 the production of cocoons was higher than it has been for many years.

### **Sponge Fishing.**

The sponge fisheries in the territorial waters of Cyprus are supervised by the Comptroller of Customs and Excise, who is also the Government Inspector of Fisheries.

The sponges obtained locally are of good quality but the Cypriot does not take kindly to the industry, and the fishing is mostly done by fishers from the Greek islands, more particularly Symi and Calymnos.

Eighteen licences were issued during 1927, of which four were for machine boats and nine for harpoon boats, as compared with a total of five licences issued in 1926.

The system by which a tithe of the catch was taken by the Government as duty in kind was abolished as from the 1st January, 1925, and the licence duty increased. Owing to this change and to relaxed control, the exact number of sponges taken cannot be

accurately ascertained, but it has been established that approximately 5,957 okes, of a value of £11,924, were gathered and taken away from the Island.

### Other Industries.

The manufacture of wine and spirits and of raisins is a well-established industry in the Limassol and Paphos districts and in certain parts of the Nicosia district. The grape harvest of 1927 was good and satisfactory prices were obtained. £86,000 were realised from the exportation of raisins, as against £58,000 in 1926. The value of the wines exported rose from £39,000 to approximately £56,000.

The manufacture of cigarettes is a thriving local industry; there are six tobacco factories in the Colony, four of which are equipped with modern machinery. The tobacco consumed has up to the present been imported chiefly from Greece. Recently, however, a few persons have interested themselves in tobacco farming on modern methods and they should in the future be able partly to supply local needs. Cyprus cigarettes are sent all over the world and enjoy an excellent reputation.

A few tons of citrate of lime were again prepared at Karavas in the Kyrenia district and realised as much as £72 per ton on the British market. It is considered that this should in the future become an important industry in the Island, as the lemons, which are plentiful, contain quite as high a proportion of citric acid as those of Sicily, from which large quantities of citrate of lime are now imported into the British Isles, and lime is abundant.

Lemon oil, extracted during the process of manufacturing citrate of lime, was exported to England and fetched satisfactory prices on the London market.

Cotton manufactures of local design form an important industry in a minor degree.

The making of lace at Lefkara, of a design closely related to Venetian point lace, is a prosperous business, and the itinerant lace-sellers have penetrated with their wares to all corners of Europe and as far afield as the continent of America.

Other exports from the Colony include minerals, gypsum and terra umbra, animals, hides and skins, cheese, sumac leaves, silk cocoons, wool, salt, vegetables and fruit.

The following statement shows the comparative amount—in quantities as well as values—of the annual exports of the principal domestic commodities during the last five years:—



Articles.	Quantities.						Value.			
	1923.	1924.	1925.	1926.	1927.	1923.	1924.	1925.	1926.	1927.
<b>CLASS I.—FOOD, DRINK, AND TOBACCO :—</b>										
<b>Animals, living :—</b>										
Goats ... ..	233	2,460	323	122	14	136	2,150	318	152	21
Oxen ... ..	2,685	9,050	2,564	2,701	1,347	25,213	79,416	24,757	37,062	19,666
Poultry ... ..	8,429	10,731	10,973	13,702	12,073	985	1,293	1,387	1,587	1,397
Sheep ... ..	7,946	15,617	6,915	1,557	1,015	7,477	13,560	9,133	2,373	2,136
Swine ... ..	1,215	3,373	610	202	273	3,787	14,473	2,598	557	840
Beans and Peas ... ..	2,915	5,726	934	6,893	13,558	2,313	4,855	1,262	4,671	9,706
Carobs ... ..	45,726	60,492	45,490	37,682	72,716	162,055	248,538	225,230	153,905	304,379
Cheese ... ..	5,411	3,600	4,638	6,062	5,349	23,401	18,315	19,606	21,888	22,717
<b>Corn, Grain :—</b>										
Barley ... ..	521,126	147,772	124,515	268,728	389,369	64,110	24,031	22,555	33,735	57,239
Oats ... ..	52,894	10,553	6,948	21,779	36,036	5,602	1,430	1,093	2,527	4,223
Vetches ... ..	12,477	694	124	647	2,744	3,788	231	54	222	714
Wheat ... ..	162,045	12,355	2,287	534	2,013	38,543	4,813	946	211	725
Bran ... ..	2,171	219	39	3	2	618	81	21	1	1
Wheat Meal or Flour ... ..	939	678	62	1	12	676	575	59	1	8
Other Corn, etc. ... ..	317	684	102	70	992	138	458	68	46	428
<b>Fruit :—</b>										
Grapes ... ..	11,010	10,781	17,101	28,109	26,770	3,294	3,216	6,056	9,563	9,043
Lemons and Oranges ... ..	10,516,007	12,478,415	19,034,690	15,667,219	22,563,858	14,033	25,920	34,264	31,342	46,116
Pomegranates ... ..	75,803	78,045	75,502	98,329	99,937	17,888	21,914	22,988	25,631	28,830
Raisins ... ..	37,731	91,733	67,908	66,069	87,949	17,400	55,294	43,972	58,198	86,508
Other ... ..	5,002	6,594	13,526	6,006	9,827	4,776	11,384	30,036	3,161	14,210
Salt ... ..	766	22	1	1	1	787	26	9	3	—
Spirit ... ..	19,800	27,057	19,801	15,442	15,349	4,124	4,397	3,973	3,052	2,747

CLASS I.—FOOD, DRINK, AND TOBACCO— <i>cont.</i>									
Tobacco :—									
Unmanufactured	3,834	1,792	209	53	1,708	11,116	4,051	577	272
Cigarettes	1,417	5,067	8,973	4,986	4,028	2,339	5,859	9,713	4,946
Vegetables :—									
Onions	26,853	36,024	25,348	43,630	36,777	4,662	6,834	5,272	8,044
Potatoes	58,537	44,222	100,399	173,993	234,116	24,172	22,311	41,723	64,389
Vinegar	141,162	171,972	179,697	199,195	201,558	5,353	4,632	4,782	5,058
Wines :—									
Commandaria	6,085	11,001	6,662	5,098	4,401	958	1,358	817	590
Other	922,272	1,732,476	1,152,039	949,615	1,446,447	47,637	70,689	55,020	38,588
Other Articles	—	—	—	—	—	5,465	5,265	3,707	9,094
Total, Class I.	—	—	—	—	—	502,845	657,369	571,996	520,869
									737,288
CLASS II.—RAW MATERIALS AND ARTICLES MAINLY UNMANUFACTURED :—									
Aniseed	953	1,322	1,192	1,613	760	2,280	3,121	2,215	2,548
Asbestos	1,929	3,854	3,290	6,331	10,904	46,067	70,035	54,639	121,857
Chrome Iron Ore	—	2,811	1,989	516	700	—	9,595	6,240	1,142
Cotton raw	10,316	7,786	12,466	8,601	15,602	47,638	34,004	46,946	31,592
Cotton Seed	210	1,444	3,946	1,845	18,122	81	579	1,471	691
Flax	1,830	2,397	1,405	1,805	2,203	2,569	4,502	1,718	3,307
Hides and Skins	3,021	3,870	1,946	2,564	2,646	23,927	30,915	22,387	24,685
Linseed	4,692	4,729	5,921	11,512	11,681	3,162	3,655	4,709	8,166
Magnesite	286	220	—	—	—	406	330	—	—
Ochre	—	53	2	—	—	—	208	8	—
Ore, Pyrites	52,227	128,188	173,255	150,363	208,122	61,555	166,202	209,664	156,240
Origanum oil	—	58	46	—	25	—	2,318	1,637	—
Silk Cocoons	—	1,209	954	284	178	30,219	34,204	23,267	6,204
Spices and Seeds :—									
Cuminseed	3,375	4,249	14,257	13,217	10,913	10,800	14,034	26,281	17,422
Sponges	93	110	60	29	149	6,853	6,222	3,546	2,303
Straw	63,581	106,717	117,448	68,748	57,683	3,347	6,986	7,651	3,703
Sumac	10,380	10,759	12,062	20,845	13,831	4,001	4,152	5,048	12,190
Terra Umbra	5,104	4,831	5,969	5,361	5,566	11,122	9,570	13,222	11,796
									18,831
									2,303
									3,703
									12,190
									8,511
									12,448

Articles.	Quantities.						Value.					
	1923.	1924.	1925.	1926.	1927.	1923.	1924.	1925.	1926.	1927.	1923.	1927.
<b>CLASS II.—RAW MATERIALS AND ARTICLES MAINLY UNMANUFACTURED:—cont.</b>												
Terre Verte ... tons	29	3	1	4	16	333	27	13	35	128		
Wool ... cwt.	4,680	5,980	5,909	4,902	5,134	18,280	24,063	26,276	20,872	23,617		
Other Articles ... value	—	—	—	—	—	4,041	4,304	5,431	24,268	35,623		
Total, Class II ...	—	—	—	—	—	276,681	429,026	462,369	449,021	624,859		
<b>CLASS III.—ARTICLES WHOLLY OR MAINLY MANUFACTURED:—</b>												
Cordage and Twine ... cwt.	77	123	120	34	58	249	392	382	133	193		
Cotton Manufactures ... value	—	—	—	—	—	12,221	20,115	25,939	375	246		
Gypsum ... tons	11,029	14,296	24,123	19,138	13,789	12,087	16,213	29,569	23,943	16,642		
Leather:—												
Boots and Shoes ... pairs	548	715	205	118	253	252	326	186	114	194		
Other ... value	—	—	—	—	—	245	112	64	18	—		
Silk Manufactures ... "	—	—	—	—	—	530	2,455	1,574	283	306		
Other Articles ... "	—	—	—	—	—	2,349	4,658	10,375	23,920	25,597		
Total, Class III ...	—	—	—	—	—	27,933	44,271	68,089	48,786	43,178		
<b>CLASS IV.—MISCELLANEOUS AND UNCLASSIFIED ARTICLES:—</b>												
Animals, living:—												
Camels ... No.	79	240	156	55	8	831	2,530	1,580	469	52		
Donkeys ... "	1,624	1,706	2,161	985	452	7,865	10,306	16,264	6,269	3,034		
Horses ... "	49	129	63	47	23	912	2,514	1,350	862	838		
Mules ... "	990	3,217	1,415	973	1,012	23,664	75,637	35,604	23,645	24,097		
Other ... "	—	9	—	—	—	33	16	28	15	20		
Total, Class IV ...	—	—	—	—	—	32,436	91,002	64,096	31,960	38,011		

**IV.—TRADE AND ECONOMICS.****Imports.**

The total value of imports of merchandise during 1927 was £1,585,940, as against £1,570,278 for the year 1926, an increase of £15,662.

The following table shows the imports for each of the last three years under the main heads of classification :—

	1925. £	1926. £	1927. £
Food, drink, and tobacco ... ..	480,191	450,603	464,428
Raw materials and articles mainly un- manufactured.	179,191	185,050	198,000
Articles wholly or mainly manufactured...	923,178	933,358	922,826
Miscellaneous and unclassified ... ..	876	1,267	686
<b>Totals ... ..</b>	<b>£1,583,436</b>	<b>£1,570,278</b>	<b>£1,585,940</b>

The following table shows whence imports were received :—

	<i>Value.</i> £	<i>Percentage.</i>
United Kingdom and other parts of the British Empire	708,083	44.65
Austria ... ..	20,691	1.31
Belgium ... ..	38,742	2.44
Czechoslovakia ... ..	57,743	3.64
France ... ..	106,179	6.70
Germany ... ..	78,038	4.92
Greece ... ..	122,430	7.72
Holland ... ..	20,414	1.29
Italy ... ..	88,059	5.55
Roumania ... ..	34,074	2.15
Turkey ... ..	22,687	1.43
Egypt ... ..	70,261	4.43
United States of America ... ..	77,318	4.87
Other countries ... ..	141,221	8.90
<b>Total ... ..</b>	<b>£1,585,940</b>	<b>100.00</b>

**Exports.**

The total value of exports of merchandise was £1,542,870, as against £1,103,571 in 1926, an increase of £439,299, or 39.8 per cent.

The following table shows the exports during the last three years under the main heads of classification :—

	1925. £	1926. £	1927. £
Food, drink, and tobacco ... ..	575,549	523,211	791,682
Raw materials and articles mainly un-manufactured.	462,569	452,931	626,021
Articles wholly or mainly manufactured...	105,671	95,511	97,126
Miscellaneous and unclassified ... ..	54,826	31,918	28,041
<b>Totals ... ..</b>	<b>£1,198,615</b>	<b>£1,103,571</b>	<b>£1,542,870</b>

The following table shows the direction of exports during the year 1927 :—

	Value. £	Percentage.
United Kingdom ... ..	278,367	18.04
Other parts of the British Empire ... ..	56,748	3.68
Egypt ... ..	267,501	17.34
France ... ..	116,499	7.55
Germany ... ..	117,181	7.60
Greece ... ..	157,021	10.18
Italy ... ..	195,094	12.64
Spain ... ..	110,605	7.17
Turkey ... ..	5,939	0.38
United States of America ... ..	27,799	1.80
Other countries ... ..	210,116	13.62
<b>Total ... ..</b>	<b>£1,542,870</b>	<b>100.00</b>

The year was remarkable for the revival of the export trade and for the good prices obtained, especially for agricultural products. The excess of imports over exports observed in the two preceding years continued in 1927, but the adverse balance of trade which in 1926 approached half a million sterling was reduced to the comparatively low figure of £43,000, while at the same time imports, so far from decreasing, showed a slight increase.

The most marked increase in exports was that of £150,474 on carobs. This was due in part to the excellence of the crop and to the high prices prevailing, in part to the fact that stocks had been held up in the previous year when the market was depressed. The improvement in asbestos production noted in 1926 was well maintained during the year under review, and exports increased by £82,855. There was also an increase of £40,579 on pyrites. Raisins, despite the fact that the exportation of grapes was normal and that of wine greater than in 1926, were shipped in unusually

large quantities, and good prices were obtained. The markets for barley and potatoes continued to improve; and oranges, of which the production was increased by 45 per cent., found a ready sale in the adjacent countries.

The principal decrease in exports was that of £17,396 on oxen, due to the falling off of the demand in Egypt and Greece. There was also a reduction in the exportation of gypsum, owing to the establishment of factories in Egypt, which are now obtaining raw material from other countries and thus cutting out the Cyprus products. Silk cocoons were again exported in reduced quantities, the local demand for them being greater. This decrease was more than compensated by an increase of £9,564 in the value of raw silk exported.

It had been anticipated that with the raising of the Customs import duties in the early part of the year the value of imports would decline. This expectation was not fulfilled, and the value of imports was actually higher by £15,000 than in the preceding year. The main decrease in imports was on machinery, of which large quantities were imported in 1926 by the mining companies, who were reorganizing their installations. There were also decreases in respect of wheat and oil. The importation of flour on the other hand was greater than in the preceding year, despite the successful wheat harvest. This is attributed partly to the cheapness of imported flour as compared with that produced locally, partly to the growing popularity among the urban population of white bread, which cannot be made from local flour. There were considerable increases in respect of cotton and woollen goods, due no doubt to the augmented spending power of the community in a successful year, and also in respect of chemical fertilisers, whose value is becoming more extensively realised.

The value of exports to the United Kingdom and other parts of the British Empire amounted to £365,115, as against £156,914 in 1926, and the value of imports from the same source rose from £687,600 to £708,083. The percentage of imports from the United Kingdom and other parts of the British Empire to the total imports for the year is higher by .86 per cent.

The value of specie imported during 1927 was £3,123, as against £2,404 in 1926, an increase of £719. The value of specie exported was £18,524. There were no exports of specie in 1926.

## V.—COMMUNICATIONS.

### Shipping.

Five hundred and eighteen steamships and 1,401 sailing vessels engaged in foreign trade called at Cyprus ports, chiefly at Famagusta, Larnaca, and Limassol, during the year, an increase of 20 and 411, respectively, as compared with the figures for 1926. A

similar increase in steamships and decrease in sailing vessels observable in the ships engaged in the coastal trade between the ports and anchorages of the Island. The increase in tonnage of the steamers engaged in foreign trade that entered Cyprus port amounted to more than 80,600 tons.

The question of harbour improvement was mooted in 1925 and in 1926 the situation was again reported on by the representative of a British firm of consulting engineers. It has not however been possible, owing to financial considerations, to give effect to the recommendations made.

The existing harbourage at Limassol and Larnaca consists of jetties for small craft, and open roadsteads; and any improvement of these ports would probably be restricted to re-arrangement and extension of the jetties, combined with dredging. At Famagusta however, the presence of natural advantages unrivalled in the eastern Mediterranean would permit of the expansion of the present harbour-works to an almost unlimited extent; and it is proposed at present to concentrate, with whatever funds may prove to be available, on the reconstruction and development of this port. The existing harbour was admirably suited to the conditions obtaining 20, and even 10, years ago when ships seeking admission rarely exceeded 2,000 tons, but the ships of 4,000 and 5,000 tons which call at present expose themselves to risk when entering the harbour in foul weather and are manœuvred with difficulty in the limited space within the breakwater.

Consideration has also been accorded to an allied proposal, which is supported in many quarters, for the establishment at Famagusta of bonded warehouses with the object of capturing the traffic in transshipment cargo destined for various ports on the Syrian, Anatolian, and neighbouring coasts. Cyprus is undoubtedly well situated for the purpose of furnishing an entrepôt for trade of this nature; and the fact that goods so landed in the Island could remain under British control and jurisdiction until reconsigned against cash payments to their destinations presents an unique and solid advantage of which traders in the Levant are not likely to lose sight.

### Foreign Mails.

There is a regular subsidised mail service between Cyprus, Egypt, Syria, and Cilicia. Under their five years' contract with the Government, as from the 1st of January, 1926, the Khedivial Steamship Company undertook to maintain direct weekly sailings between Cyprus and Egypt on the above itinerary.

The time taken in transit by mails from the United Kingdom averages from a week to 10 days. A sea post-office, worked on board the mail steamer, greatly expedites the sorting and delivery of the incoming mails. During the year, the Post Office received

5,911 inward mail-bags and despatched 2,553 outward mail-bags, an increase of 701 and 1,421 bags, respectively, compared with the figures for the previous year.

Mails with Syria, Turkey, and Greece were exchanged by vessels of the Lloyd Triestino, Servizi Maritimi, Messageries Maritimes, and Greek steamship companies at weekly, fortnightly, and irregular intervals; 336 mails were despatched and 524 received, an increase of 119 and 110, respectively, as compared with 1926.

In addition to the Khedivial Steamship Company, which, as above mentioned, maintained a service of mail steamers, under contract with the Government, between Cyprus and Egypt, the Lloyd Triestino Company maintained a service of passenger steamers which visited Larnaca and Limassol about four times a month on an itinerary including Egypt, the Syrian Coast, Cyprus, Constantinople, the Piraeus, Venice, and Trieste. Steamers of the Società Italiana di Servizi Maritimi visited Cyprus at regular intervals on an itinerary similar to that followed by the Lloyd-Triestino vessels, except that their home port is Genoa. Cargo steamers of the Moss Line called at regular intervals, while steamers of the Prince Line were occasional visitors, plying with cargo from England, Egypt, and Syria to Cyprus. Vessels of the Messageries Maritimes also called at Cyprus at intervals of a fortnight, and there were direct sailings at frequent but irregular intervals by Greek steamers to the Piraeus.

Communication with abroad, either by aeroplane or wireless telegraphy, has not yet been established.

### Internal Posts.

Motor mail services are run daily between the various towns of the Island, and there are branch post sections to the villages. One new mail section serving four villages was established, and 20 villages were included in the various existing mail routes, while endeavour continues to be made to extend facilities so far as is practicable even in the most remote districts. The estimated number of miles travelled in the conveyance of mails during the year is 416,000, an increase of 22,000 miles as compared with the previous year.

Six district post offices, seven sub-offices, three branch offices working during the summer months only, and 461 postal agencies, an increase of 26 on the preceding year, were in operation during the year. Postal-order business was transacted at 37 offices.

The series of postage and revenue stamps introduced in 1924 to replace the separate issues previously used for postal and revenue purposes now consists of 17 denominations ranging from  $\frac{1}{4}$  piastre to £1, a new denomination of  $2\frac{1}{2}$  piastres having been introduced in consequence of the revision of postage rates under the Stockholm



Convention, and in accordance with the Convention certain changes were made in the colour scheme of the series.

Stamps and stamped stationery sold during the year amounted to £54,655, but of this sum £12,405 represents Customs duty brought to account by means of stamps. Sales to philatelists realised £764, a decrease of £957 on the figure for 1926.

The total number of articles dealt with by the local post office was 4,149,379, an increase of 880,481 as compared with 1926. 3,121,474 articles were posted in the Island, an increase of 750,850 and 1,027,905 articles were received from abroad, an increase of 129,631. Correspondence for local delivery shows an increase of 590,443 items, and that posted for abroad, including the United Kingdom, an increase of 160,407. The increase of correspondence despatched to the United Kingdom amounted to 54,626 items.

The total number of parcels posted was 17,585 and of those delivered 37,465, representing a decrease of 31 and 817 respectively. Parcels posted for delivery in Cyprus show a decrease of 454, and those destined for other countries an increase of 423, on the figures for 1926. The estimated value of merchandise exported by parcel post was upwards of £12,913, a decrease of some £700. The principal articles so exported were, as previously, Lefkara lace and embroidery, cigarettes, and silk, cotton, and linen piece-goods.

Parcels received from overseas totalled 25,714 or 363 fewer than in 1926, to a value of £72,774 as against £63,266. A slight increase is again to be recorded in the traffic handled under the cash-on-delivery system. As in 1926, a number of cash-on-delivery parcels had to be returned to the country of origin as undeliverable.

The year in general was satisfactory. Ten licences to install and maintain wireless telegraphy receiving apparatus were issued under the provisions of the Wireless Telegraphy Regulations, 1925. Such licences entitle the holders to install and maintain apparatus for receiving messages only. The installation or maintenance of apparatus capable of transmitting messages is prohibited.

Owing to the fact that all receipts from the sale of the combined postage and revenue stamps are credited under one head, it is not possible to give an actual figure of earnings. The expenditure, however, decreased by £982, and there is no doubt that the Postal Department continues to show a clear profit.

### Telegraphs.

The Eastern Telegraph Company maintains a telegraph cable between Larnaca and Alexandria, and land telegraphs between the six principal towns of the Island. During the summer season Platres and Mount Troödos are connected with the system. The only Government telegraph is a line along the railway from Famagusta to Morphou and Evrykhon.

### Telephones.

There are small telephone exchanges, connecting the various Government offices and the residences of certain Government officials, at Nicosia, Famagusta, Larnaca, and, during the summer season, at Troödos. Trunk lines connect Troödos with various stations on the railway, and through the central exchange at Nicosia with Famagusta and Larnaca. Lines have also been added connecting Famagusta with Cape Andrea and Cape Greco. Telephones have assumed an importance in the conduct of Government business, but it has not yet been practicable to establish a system for the use of the general public. Some 103,970 calls were made in 1927.

### Railways.

The Cyprus Government Railway consists of a line from the port of Famagusta, at the north-eastern end of the Island, to Morphou, near its north-western extremity. It traverses the Central Messaoria plain and passes through Nicosia, the capital. From Morphou there is an extension into the foot-hills of Mount Troödos to Evrykhon, a village situated in the wide and fertile Solea valley at an altitude of 1,500 feet above sea-level. The total length of line open for traffic is 76 miles.

A private line, working as a branch of the Government Railway, runs from the Skouriotissa mines, situated in the Solea valley below Evrykhon, down to the sea at Karavostassi, south of Morphou, where the Cyprus Mines Corporation has constructed a pier for the shipment of ore; the length of this line is about five miles.

The gross expenditure and the gross earnings of the Railway for the year were £23,646 and £25,176 respectively, showing decreases of £1,719 and £194 on the figures for 1926. The financial position of the railway was sounder at the end of 1927 than at the end of the previous year; but passenger traffic continued to decrease. The facilities afforded by motor-transport and the remoteness of many villages from the railway line combine to render the railway less popular as a means of locomotion. On the other hand, the goods tonnage carried showed an increase over 1926, despite the fact that, consequent upon the abolition of the tithe in the previous year, no grain was transported on behalf of the Government. This increase was mainly due to large imports of artificial manure, flour, and cut timber.

The financial success of the railway depends upon the quantity of goods-traffic passing over it. This again depends upon the general commercial prosperity of the Island and also upon the success of the mining operations now being carried on. The general situation with regard to both of these factors may be held to justify a reasonable optimism as to the future of the railway.

No serious accidents occurred during the year. In the early part of November, floods caused some damage to the permanent way.

### **Roads.**

Little fresh construction work was carried out in 1927. In proportion to its population Cyprus is unusually well supplied with roads. The main and secondary roads alone amount to 2.82 miles per 1,000 of population. If village roads are included, the proportion is 9.28 miles per 1,000.

About 1,000 miles of the roads are traversable by motor-car. Of recent years there has been a very great increase in motor traffic with a corresponding increased wear of the roads. In 1927 there were 900 motor vehicles in the Island, 100 more than in the previous year.

£31,400 were spent on road work during the year.

## **VI.—JUSTICE, POLICE AND PRISONS.**

### **General.**

The Cyprus Courts of Justice Order, 1927, superseding the Cyprus Courts of Justice Order, 1882, was brought into force on 1st October, 1927. The Order provides *inter alia* for an increase in the composition and jurisdiction of the Supreme Court, for the appointment of four Puisne Judges (of whom two shall be Cypriots instead of one, and for the formation of 3 instead of 6 Judicial Districts. It also restricts the jurisdiction of the Moslem Sheri Courts.

### **Criminal Returns.**

In 1927 109 persons were tried by the Assize Courts and 106 by the District Courts, as against 130 and 139, respectively, in 1926. Seven persons were charged with murder and 19 with manslaughter, as against 15 and 20 in the previous year. There were 5 convictions for murder, as compared with 10 in 1926. Summary convictions rose in number from 35,262 in 1926 to 39,874 in 1927. The statistics show a decrease in serious crime and some increase in minor crime. There was a satisfactory decrease in burglary and housebreaking, animal stealing, malicious injury to property and animals, and praedial larceny.

### **Civil Proceedings.**

2,650 actions were brought in the District Courts, a decrease of 38 on the figures for 1926. In the Courts of the Town Village Judges (now styled Assistant District Judges) 3,971 actions were brought, as against 4,561 in 1926, and in the Courts of the Rural Village Judges (Assistant District Judges) 5,539 as against 5,647: the decrease was largely in "actions on bonds".

### **Military Police.**

During the year, 63 recruits, 18 Moslems and 45 Christians, were enlisted, bringing the total number of "other ranks" up to 745. Of this number, 745 can read and write their own language and also speak a second language.

All other ranks, with the exception of 3, went through a course of musketry training and fired range practice in accordance with the regulations of the Force. Lewis-gun practice was also carried out with satisfactory results.

The discipline and moral of the Force during the year were excellent.

### **Rural Police.**

The actual strength of the Rural Police on 31st December, 1927, was 752. All of these could read and write one or more languages. 135 rural constables were enlisted during the year.

The discipline and efficiency of the rural constables were entirely satisfactory. They afforded most valuable assistance to the Police in the prevention and detection of crime, to the Commissioners in reporting offences against the Forest Laws, and to the Veterinary Officer in reporting outbreaks of disease. They also carried out the sheep, goat, and pig counting under the supervision of the Military Police.

### **Prisons.**

Discipline was well maintained. The sanitary condition of the prisons was satisfactory and the health of the prisoners good. Convicts were employed on various kinds of industrial labour, including tailoring, bootmaking, carpentering, weaving, masonry, carpet-making, as well as on agricultural and reafforestation work.

The daily average number of persons detained in all the prisons was 596.41, as compared with 594.45 in 1926.

At Athalassa Reformatory for juvenile offenders the daily average number was 53.55. These juveniles were employed as in previous years on general farm work in connection with the Athalassa farm and on various other kinds of work calculated to suit them for useful trades. The vast majority of offenders are found to lead honest lives on their release from the reformatory.

## **VII.—PUBLIC WORKS.**

The expenditure under this head amounted to some £80,400, as compared with £95,400 in 1926. As usual, road work constituted the principal item of expenditure. There are now about 900 miles of main and secondary roads under the control of the Department, and almost the whole of the £31,400 spent on road work during the year was devoted to keeping these open to traffic. Owing to shortness of funds, little work of an extraordinary nature could be undertaken.

The year's building programme, for which a provision of £10,000 was made, included an extension to the Nicosia hospital for use as a venereal clinic, extensions and alterations to the Government offices and the Courts at Nicosia, and the continuation of work on the new Government offices and Court House at Kyrenia.

Schemes for the improvement of water supplies were satisfactorily carried out or completed at 31 villages. The general outlines of the schemes were the same in each instance, consisting in the construction or improvement of chains of wells or aqueducts.

In addition, examinations were conducted and reports furnished by the engineers of the Public Works Department in consultation with the Medical Officer of Health on the water supplies of 2 villages throughout the Island. The necessary means to enable these schemes to be undertaken were provided, on the half-and-half principle, by the appropriation by vote of the Legislative Council of surplus Verghi Kimat funds and by subscriptions of equal amounts from the inhabitants of the villages concerned.

### **Irrigation.**

The usual works connected with the maintenance and repair of the irrigation reservoirs and channels, which are situated in the Eastern Messaoria, near Famagusta, were satisfactorily carried out under the supervision of the Irrigation Superintendent. The year was free from incident, and no damage from floods was sustained by the irrigation works.

It is now generally accepted that Cyprus is by natural configuration unsuited for the construction of irrigation works on a large scale, and that the best method of conserving the water supply of the country is by afforestation. Encouragement is also afforded to the extension of irrigation by the sinking of chains of wells, and by the use of mechanical means to raise to the surface subterranean water of which a sufficient quantity is available in most parts of the Island. The gardens and orchards at Famagusta, from which port there is a considerable export trade in oranges, and fruit and vegetables in general, is an instructive example of the results that can be attained by the employment of air motors, which are steadily increasing in popularity.

During the year, the Island was again visited by Mr. Beeby Thompson, Consulting Engineer for artesian water supplies, who recommended the undertaking of artesian borings in certain parts of the Island. The services of a Water Engineer and a driller were obtained and an expenditure of £2,000 was incurred on drilling operations. The results of the bores made promised well for the future; it seems probable that good supplies of artesian and sub-artesian water will be obtained, more especially in the neighbourhood of Famagusta and of Morphon Bay.

### **VIII.—PUBLIC HEALTH.**

Except for the endemic prevalence of malarial fever, the climate of Cyprus is healthy and temperate, and with proper precautions there should be no difficulty in enjoying complete immunity from this disease. The heat and humidity in certain localities during the summer months impose a certain strain, but access to the hills is

easily practicable within a very short distance. The climate during the winter might almost be described as ideal, combining as it does invigorating cold with clear sunshine. The continued dullness of more northern climes is seldom experienced, and a rainy day is invariably succeeded by a cloudless sky.

Public health in 1927 was satisfactory. Cyprus remained free from plague, typhus, and other virulent diseases common in the Near East. There was also no case of rabies during the year. The prevailing diseases, other than malaria and phthisis, were those of the digestive and respiratory systems, influenza and dysentery. In one village there was a serious outbreak of enteric attributed to a contaminated water supply, but the general incidence of this disease has of recent years been greatly diminished.

There was an increase in the number of trachoma cases; but the increase would seem to be apparent rather than actual and due to the opening of special Eye Dispensaries.

Phthisis, according to the official figures, would appear to have been slightly more prevalent than in 1926. Owing, however, to the extreme reluctance of private practitioners to report cases of phthisis, its actual incidence is hard to determine.

Although climatic conditions were more favourable in 1927, 500 more cases of malaria were treated than in the previous year. This may to a great extent be attributed to the opening of fresh dispensaries and to the growing readiness of the people to apply for medical aid. It is interesting to observe that whereas in 1913 out of 30,458 patients, 24.1 per cent. had malaria, in 1927 out of 58,456 patients 16.19 per cent. had malaria; and that, whilst in 1913 21.82 per cent. of 9,178 children were examined had enlarged spleens, in 1927, 42,455 children were examined and the spleen rate was 12.9 per cent.

The anti-malaria works carried out in this year include the cleaning of streams and drains, the draining and reclaiming of marshes, screening or filling in of wells, and the stocking of tanks and wells with fish. House-to-house inspections were made by the Sanitary Inspectors, large quantities of larvicide were used and quinine was distributed free of charge to the population. Lectures accompanied by lantern slides were given in several places with a view to arousing the intelligent co-operation of the people in anti-malaria work.

The infant mortality rate in Cyprus is unduly high. This is attributed in part to malaria, in part to inherited syphilis, and in part to want of proper care and attention. An Infant Welfare Centre was opened in Nicosia and a nurse, specially trained in Child Welfare work, visited the Centre twice weekly and gave advice and treatment. At the end of the year, a Venereal Disease Clinic was opened in Nicosia and a specialist appointed.

In the autumn of 1927, Dr. A. E. Horn, C.M.G., visited the Island in order to report on the working of the Medical Department.

During the year, there were two hospitals and a sanatorium maintained by the Government, in operation, together with four Government-aided hospitals, 27 rural dispensaries, and 7 branch dispensaries. Each rural dispensary is the headquarters of a rural medical officer, who works among the village population. The duties of these officers are sanitary as well as medical, and they are engaged in particular in the campaign against malaria.

The total number of beds in the Government hospitals is 224 and almost 4,000 patients were admitted during 1927, 721 surgical operations being performed.

At the close of the year, 130 inmates were detained at the Lunatic Asylum, as against 118 at its commencement. 19 persons were discharged as cured and 10 died; the number of new cases admitted was 41. The accommodation of the institution was ample. Lunacy in Cyprus is generally of a mild form and restraint had to be resorted to in 3 cases only. Employment is found for some of the inmates indoors while some are employed in keeping the grounds in order.

The number of lepers admitted to the Leper Farm, which is run on the lines of a village, with its own church, mosque, and schools, was 5, and the number of lepers detained at the close of the year amounted to 81, as compared with 83 at the close of 1926. There were 6 deaths, all of which were advanced cases of the disease. Some of the inmates have been treated with gynocardate of soda, leprol, mogrol, and preparations of antimony with some success. In nodular cases, disappearance of the nodules and growth of the eyebrows has been noted. It is satisfactory to record that the disease has recurred in none of the 5 cases released on parole.

The number of children at the end of the year in the Home for the healthy children of lepers was 9, all of whom remained free from any sign of the disease.

The total number of births registered was 8,586, being 25.2 per thousand of the population as against 8,677 or 25.9 per thousand in 1926.

The total number of deaths was 5,328, being 15.6 per thousand as against 5,749 or 17.1 per thousand in 1926. The population thus showed a natural increase of 3,258 as against 2,928 in the preceding year.

## IX.—EDUCATION.

### Primary Education.

Education in Cyprus is not compulsory, and the control of the schools is left in the hands of the various religious communities which have their several governing bodies operating under the

upervision of the Education Department. Considerable importance is attached to the benefits derived from education and a great interest is taken in the administration of the schools.

The Greek Christian schools continued to work under the law enacted in 1923, with satisfactory results. The enactment of this law had been a matter of controversy for some years, but in 1923 the desire for more efficient management and increased financial support culminated in a strong request from the Greek-Christian members of the Legislative Council that the community should come educationally into line with the other religious denominations. As in the case of these other denominations, the law, once enacted, has been accepted with equanimity by all classes of taxpayers, and the benefits obtained thereunder are generally recognised and appreciated.

Under the law which now applies, as it has been explained, to all communities, the teachers are appointed by the Board of Education, instead of by the Village Committees under the previous administrative system; they are paid on a fixed scale according to their service and class; and on retirement are eligible to receive gratuities. Duly qualified teachers have replaced unqualified teachers, and by the grant of gratuities it has been possible to discontinue the service of many old teachers who by reason of age or infirmity were incapable of the proper performance of their duties. On the financial side it has been practicable to do much in the way of opening new schools, particularly in the smaller villages, and of improving existing buildings.

The Moslem community is well supplied with schools, which in the towns are well attended. Those in the villages are, however, small and a certain difficulty is experienced in maintaining an adequate staff of teachers. Some of the teachers left the Island in 1925 for Turkey, in search of further education and in the hope of obtaining superior appointments. It was even necessary to re-employ temporarily a few teachers retired previously on account of age. The Education Department has, however, applied itself to the question of recruiting fresh personnel with some success, the erection of new school buildings and teachers' residences having rendered these posts more attractive.

During the year under review there were 626 Greek-Christian, 268 Moslem, and 14 other denominational schools open, giving a total of 908, an increase of 19 as compared with the preceding year. Some 46,677 scholars were enrolled.

The total expenditure on elementary education in 1927 was £96,681. It is estimated that the total number of children in Cyprus of elementary school age, six to twelve years, is about 63,000. Approximately 46,677 scholars are enrolled in the schools, leaving some 16,000 to be accounted for as not attending school. Of these the majority are girls, nearly all the boys attending school



for at least four years out of the six. The proportion of those who continue their education after elementary school age is probably not more than one-third of those attending while of that age.

The schools of the smaller communities, Latins, Maronites, Armenians, and Jews, continued to make satisfactory progress. The Armenian schools at Nicosia and Larnaca are still the most progressive in spite of the strain on their resources caused by the refugees from Asia, who have swelled the ranks of their pupils.

The progress of elementary education under the British Administration is well illustrated by a comparison of the returns for 1926 and 1927 :—

		<i>Schools.</i>	<i>Scholars.</i>	<i>Expenditure.</i>
1926...	...	170	6,776	£3,672
1927...	...	908	46,677	£96,681

Of this expenditure, £59,000 was contributed by the Government as a grant-in-aid and the remainder was raised by direct taxation. In addition, an amount of about £39,892 has been raised on loan for building purposes from Government or private sources, to be repaid in periods of five to ten years from local assessments.

Twenty-nine new school buildings were completed during the year, nineteen others commenced, and additions and repairs were carried out in seventeen instances.

### Secondary Education.

Secondary schools are not under the control or inspection of the Education Department except in so far as some of them receive grants from the Government, on certain conditions, for the teaching of English.

The principal Moslem secondary schools are the Boys' Lycee and the Victoria (for girls) in Nicosia, and there are intermediate classes attached to the elementary school of each town. The programmes are arranged to prepare pupils for higher education at Constantinople.

There is a Greek-Christian gymnasium, or high school, in each town except Larnaca, which has a flourishing Commercial Lyceum, as well as a Priests' Training School. These schools prepare their pupils for the University of Athens, though relatively few of them are able to proceed so far. Cyprus can provide only a limited number of professional and business openings, and there is no doubt that the needs of the Island in secondary education are not more than fully satisfied and that the future prospects of the secondary schools must depend to a large extent on improved facilities and increased opportunities for emigration. At present many well-educated boys are compelled to remain for some time without employment, a position of affairs which is both economically and morally unprofitable.

English is taught voluntarily and with some measure of success at all these schools, and the Moslem Boys' Lycée, Famagusta Gymnasium, and the Lyceum of Larnaca have English masters.

Other secondary schools are the English School at Nicosia (undenominational), also known as the Commercial College, which is conducted on the lines of an English grammar school, the American Academy at Larnaca (attached to the Reformed Presbyterian Mission), and the commercial school founded at Lemythou in 1912 by the late Mr. D. Mitsis, a native of that village.

There are three girls' private schools, one at Nicosia, attached to the Reformed Presbyterian Mission, and two at Limassol.

#### . GOVERNMENT EXAMINATIONS.

The Government examinations in English, Turkish, and Greek, and the Civil Service Qualifying Examination were, as usual, held during the year. About 500 candidates presented themselves for the examinations in English, of whom more than one-half were successful and were awarded certificates. The certificates awarded to the successful candidates are highly valued, not only by Government officials but also by those seeking employment elsewhere.

#### Technical Education.

There are no technical schools proper in Cyprus apart from the advanced secondary schools to which reference has already been made. In the elementary schools needlework is widely taught, and silkworm eggs are supplied on a large scale by the Agricultural Department for instructional purposes. In a few schools carpentry is taught.

The agricultural school, which is maintained by the Agricultural Department and is described in another chapter of this report, has continued its work as in previous years. Lectures on chemistry have been given for some years by the Government Analyst, the classes being attended principally by student compounders preparing for the pharmaceutical examination. Apprentices are taken by the Government Railway and in the workshops of the Public Works Department, while in the Central Prison at Nicosia boot-making, tailoring, and carpet-making are taught.

### X.—LANDS AND SURVEY.

The tenure of land in Cyprus is governed by the Ottoman Land Law. Agricultural land in general (Arazi Mirié) is held by a title deed (Qochan), which is issued by the Land Registry Office, the real ownership remaining with the State. It can be alienated by sale, in which case a new title deed is issued and the transaction registered by the Land Registry Office. It is transmissible by inheritance within certain specified degrees of relationship, but cannot be transmitted by will. If it becomes vacant by failure of heirs, it escheats to the State (Mahlul).

Buildings, trees, gardens, vineyards, and wild grafted trees are known as mulk (Arazi Memluke), and included in this category are building sites within or near a town or village. Immovable property held under this tenure belongs in full to the owner, is alienated and inherited like movable property, and the provisions of the land code do not apply to it.

Unowned or waste land is known as Hali (Arazi Mevat).

This may, with the permission of the Government, and on payment of certain fees representing its equivalent value, be taken up and cultivated, the ownership, as in the case of Arazi Mirié, remaining with the State. Land left uncultivated for certain periods can be forfeited.

The charges on Arazi Mirié are (i) Verghi Kimat, a tax on all immovable property at the rate of 4 per cent. of the assessed value. This may, however, be varied in any town or village in accordance with the Law of 1907, in order that on completion of the valuation begun in 1910 the place may yield an aggregate sum equal to that levied before the coming into operation of the valuation; (ii) a fee on mortgage and transfer by sale or inheritance; (iii) an education tax, which in towns is double the Verghi Kimat tax and in villages two-thirds of the Verghi Kimat tax.

Prices of land vary according to its adaptation to certain crops, its means of irrigation, and its position in relation to towns and villages. They vary therefore from a few shillings to £30 or £40 a donum ( $\frac{1}{3}$  acre), while land in the vicinity of towns, suitable for building sites, may fetch over £200 a donum. The average size of a cultivated plot of land is 2 acres, and of the average holding  $7\frac{1}{2}$  acres. An intending settler would, however, have difficulty in obtaining at a reasonable rate any considerable area of suitable land for development.

During the year, 246 acres of vacant land (Hali) were sold by Government for £189, the full estimated value being equivalent to an average price of 15s. 4d. per acre. Seventy-two acres of waste land were sold by auction, realising £234 15s., an average price of £3 5s. 3d. per acre.

Conditions as regards land tenure continue to improve, and the value of land increases steadily. The number of forced sales consequent on the foreclosure of mortgages and for the satisfaction of debts was less by 511 than in 1926, and the prices realised at such sales were more favourable.

An increase of transactions carried out by the Land Registry Department is observed principally under the registration of properties and under the registration of mortgages, the form of security now generally relied on by moneylenders. It is satisfactory to note that there was a decrease of one thousand in attachments for debt, as compared with 1926; and the large increase in voluntary sales

and the improvement in the prices realised are encouraging signs of amelioration in the economic condition of the peasantry. It is computed that on the 31st December, 1927, the total indebtedness of the Colony amounted to approximately £1,647,800, and the total value of immovable property to £14,200,000 or £41.82 per head of the population.

The work of land registration in Cyprus shows no sign of diminishing in importance. Two more sub-land-registry offices were established during the year. The establishment of sub-offices is of much assistance to the rural population, especially in those areas where co-operative societies have been formed, and applications therefor are being met as far as possible. It is estimated that officials of the Department deal personally in a year with more than a quarter of the total adult population of the Colony in connection with the various transactions relating to land.

The reconstruction of the Kyrenia Land Registry records, which were destroyed by fire in 1926, was completed during the year.

In 1926 all the field work connected with the re-survey of the Island had been completed and all the towns with the exception of Nicosia and Famagusta surveyed. In 1927 the survey of Nicosia within the ramparts was practically completed and the preliminary work for the survey of Famagusta taken in hand. The reduction of the field plans to form maps of the Island on the scale of 2 inches and  $\frac{1}{2}$ -inch to the mile continued. The topographical survey of the forests proceeded at a satisfactory rate.

Progress was made with the revaluation of the immovable property of the Colony commenced in 1910, and it is anticipated that by the end of 1928 all properties will have been revalued.

## **XI.—LABOUR.**

Labour in Cyprus is plentiful and the conditions are on the whole good. There is no labour problem in the Colony. The vast majority of the workers are employed either by small agriculturists or by master craftsmen. Factories are very few, and any such institution as the so-called "factory system" is unknown. In short, conditions are oriental rather than occidental.

The largest employers of labour are the Cyprus Mines Corporation, with an average pay-roll of about 2,000, the Cyprus Asbestos Company, with from 800 to 4,500 employees according to the season, and the Public Works Department, which during 1927 employed an average of 1,000 labourers per diem.

The hours of work at the mines and for the Public Works Department vary from 8 to 10 hours per day. Generally speaking, the working hours most commonly recognised in the Island are those from sunrise to sunset, though it is to be noted that the precise

times of " sunrise " and " sunset " are not very rigorously interpreted or observed. The system of recognising that the hours of work are the hours of daylight has obvious advantages in a country where the lower classes are for the most part without clocks.

The rates of labour at the mines average about 18cp. (2s.) a day for men and 12cp. (1s. 4d.) for women and boys. In the Public Works Department the corresponding usual rates are 16cp. for men and 10cp. for women and boys, which are increased by 2cp. during the harvest season. The average rate of pay for all labour in the Public Works Department has increased from 14.70cp. per diem in 1926 to 15.05cp. per diem in 1927.

Under the Mines Regulation Amendment Law of 1925 employers are liable, subject to the provisions of the Law, to pay compensation in the case of death or injuries to workers in the mines while so employed.

## **XII.—MISCELLANEOUS.**

### **Legislation.**

Thirty Bills were introduced and passed by the Legislative Council during the year. The majority of these are of purely local interest or are referred to elsewhere in this report, and deal with the appropriation of public funds and with various minor amendments to existing laws. Of the remainder the most noteworthy or interesting are the following :—

Law 7.—To amend the Law relating to Dangerous Drugs.

Law 8.—To amend the Law with respect to the Carriage of Goods by Sea.

Law 16.—To make provision for the contribution of the Colony of Cyprus to Imperial Defence.

Law 22.—To regulate the Opening Hours of Shops on Sundays.

Law 23.—To provide for the Limitation of the Hours of Employment in certain Cases.

### **Emigration and Immigration.**

The emigration of Moslems to Asia Minor continued during the early part of 1927, but by August most of those who had opted for Turkish nationality in accordance with the Treaty of Lausanne, and intended to leave Cyprus, had departed. It is estimated that since 1924 about 5,000 Turks have emigrated to Anatolia.

Emigration to Egypt and Greece proceeded as in previous years and a number of Cypriots took advantage of a demand for labour in Australia and have established themselves there. A considerable number found employment in the Belgian Congo and other parts of Central Africa.

There was a small immigration of Armenians, chiefly from Greece, and permission to enter Cyprus was granted to 181 Armenians under guarantees from persons resident in the Colony. Cyprus does not afford a field for immigration to any large extent.

The summer resorts of Troödos, Platres, and Pedoulas attracted many visitors from Egypt and Syria and some from 'Iraq. The total number of visitors to Platres during the season is estimated at about 1,700.

### **Co-operative Societies.**

Very satisfactory progress has to be recorded in the co-operative movement for the year 1927. At the end of the year there were 97 co-operative credit societies and 15 co-operative societies, as against 49 and 13, respectively, in 1926. Great assistance to the movement has been afforded by the passing of the law giving power to co-operative credit societies to effect purchases and sales of products, commodities, or raw material for agricultural purposes, and making deposits and loans from non-members of the societies acceptable. A further advantage has been the establishment of savings banks concurrently with co-operative credit societies and the amalgamation of both.

### **Banks.**

The chief banks in Cyprus are the Ottoman Bank, with branches at Nicosia, Larnaca, Famagusta, Limassol, Paphos, Lefkara, and, during the summer months, Troödos; the Bank of Athens, with branches at Nicosia and Limassol; the Bank of Cyprus, with its head office at Nicosia, a branch office at Limassol, and agencies at Larnaca, Famagusta, Paphos, Kyrenia, and Morphou; and the Ionian Bank, which established a branch at Nicosia in 1926.

There is also a Government Savings Bank, which at the end of the year had 124 depositors. The amount of deposits during the year totalled £3,460.

The Agricultural Bank established in June, 1925, under the joint auspices of the Government and the Ottoman Bank has, though still in its infancy, shown every sign of developing into a sound financial undertaking and has proved most useful in the assistance it has rendered to co-operative societies. Both these institutions, the Agricultural Bank and the co-operative societies, seem destined to play an important rôle in the agricultural life of the country. They afford to the peasant farmer a much-needed chance of avoiding the moneylender, and it is hoped that in the course of a few years the general indebtedness of the Island will through them show a considerable improvement.

### **Chamber of Commerce.**

The Cyprus Chamber of Commerce was legally registered under the Companies (Limited Liability) Law of 1922 on 29th April, 1927. It was founded with the view of fostering the trade of the

Colony by promoting a spirit of co-operative enterprise amongst the local merchants, and by facilitating commercial relationships with abroad. The Chamber is working in close connection with the London Chamber of Commerce, the Federation of British Industries, and the Federation of Chambers of Commerce of the British Empire. Efforts are being made to establish a closer liaison with Egypt and Greece.

Since its inception the Chamber has dealt with approximately one thousand inquiries regarding Cyprus produce from abroad; and the issue by the Chamber of certificates of origin has facilitated trade transactions between Cyprus and Turkey.

#### **Loan Commissioners.**

The Loan Commissioners continued the issue of loans to public bodies, and sums amounting to almost £4,600 were loaned to municipalities, etc., for the installation of electric light plants, the erection of stud stables, and the improvement of water supplies.

As a result of the abolition of tithes, the practice of lending tithe grain as seed corn has now completely ceased.







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REPORT FOR 1927

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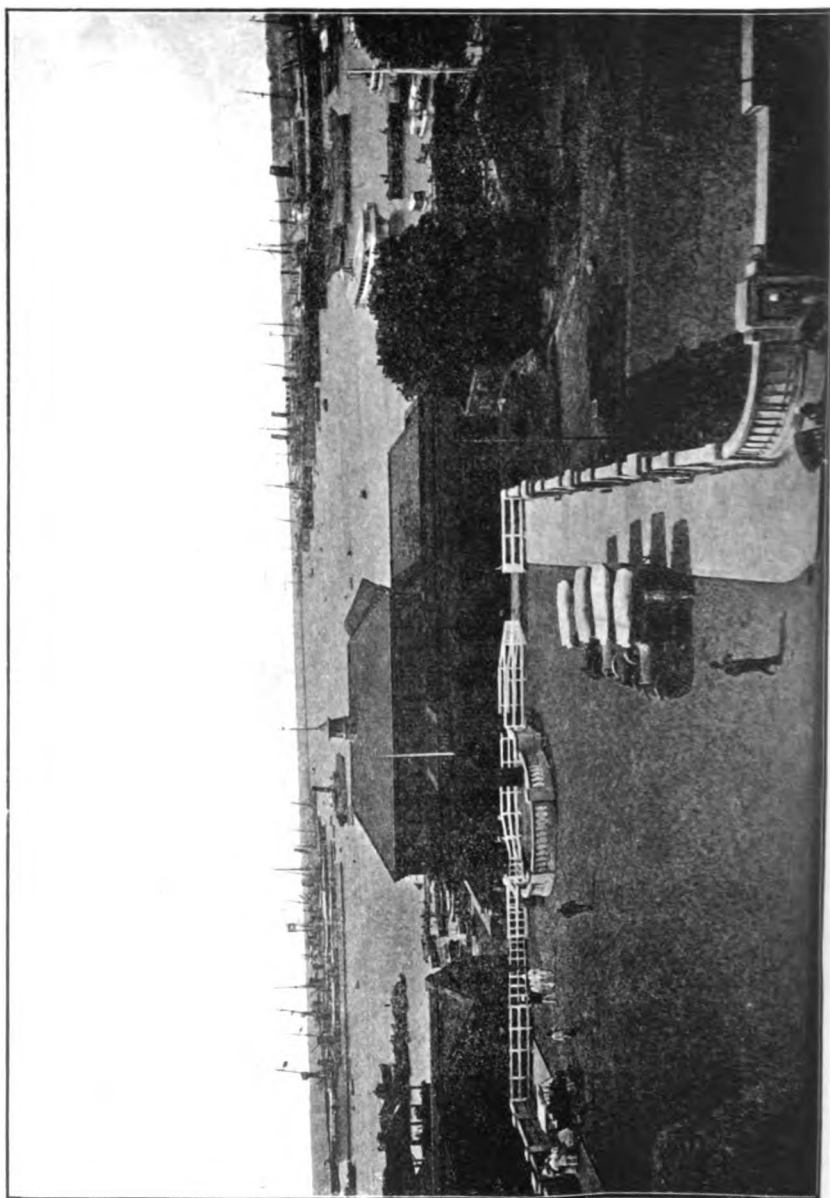
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## Prefatory Note.

### GEOGRAPHY.

**C**EYLON, the ancient Taprobane, is an Island in the Indian Ocean, off the southern extremity of the Indian peninsula, lying between  $5^{\circ} 55'$  and  $9^{\circ} 50'$  N. latitude and  $79^{\circ} 42'$  and  $81^{\circ} 53'$  E. longitude. Situated on the direct route from Europe to Australia and the Far East, roughly halfway between Arabia and China, it has been known from very early times as an important trade centre in the East. It is in very close proximity to India, and from an economic point of view has always been considered a part of it. The greatest length of the Island from north to south, i.e., from Point Palmyra to Dondra Head, is 270 miles; its greatest width 140 miles, from Colombo on the west coast to Sangamankanda on the east. Its area is 25,332 square miles, nearly the same as that of Holland and Belgium, or about half the size of England.

The northern and north-central parts of the Island form one great plain from sea to sea, only occasionally broken by a spur of undenuded rock. The maritime districts consist of similar level or undulating stretches, but the centre of the southern half of the Island is filled by a circular mountainous area almost equidistant from the two seas. This mountainous region is intersected by deep valleys, which tend to run roughly north-east and south-west. The height of the intervening ridges increases gradually from the coast, and culminates in Pidurutalagala at an elevation of 8,292 feet.

The sea coast of Ceylon has a very irregular outline, lakes and lagoons having been formed, in many parts of it by the throwing up of sand barriers through the interaction of the rivers and the sea. There are only three real harbours, those of Colombo, Trincomalee, and Galle. The first is a capacious artificial harbour constructed out of an insecure anchoring place by the building of extensive breakwaters. The second is a magnificent land-locked basin, but situated on the less accessible, populous, and fertile eastern side of the Island. The third was, at one time, the premier harbour of Ceylon, but on the completion of the Colombo breakwaters in 1885 it ceased to be a calling place for East Indiamen and ships of war.

## HISTORY.

The authentic history of the Island begins at the sixth century B.C., when an Aryan invasion from the north of India under the leadership of Vijaya overcame the aborigines and established the Sinhalese dynasty. Early attention appears to have been paid by the invaders to irrigation works, agricultural development, and other branches of civil administration, and by the end of the third century A.D. a comparatively advanced stage of civilization had been reached.

The history of Ceylon down to the sixteenth century may be divided into two parts, viz., the period of the Sinhalese *Mahavamsa*, circa 500 B.C. to 300 A.D., and that of the *Suluvansa*, from circa 300 A.D. onwards. The first period is one of increasing development and expanding civilization, connected chiefly with the extension of Buddhism, which was introduced about 247 B.C. The second period is one of ever-increasing pressure from the Tamils, Pandians, and Cholas from India, with occasional successes on the part of the Sinhalese, particularly during the reign of their famous king, Parakrama Bahu I. (1153 to 1186 A.D.).

In the sixteenth century the Portuguese formed settlements on the west and south of the Island; in the next century they were dispossessed by the Dutch. In 1796 the British took possession of the Dutch settlements in the Island, which were then annexed to the Presidency of Madras, but five years later, in 1802, Ceylon was constituted a separate Crown Colony. In 1815, the districts of the interior, which had maintained their independence under the kings of Kandy, were acquired by Great Britain as the result of a rebellion against the Kandyan king, and the whole Island was thus united under the British rule.

Ceylon is noted for chronicles of great age and high authenticity. The ruins of numerous stately buildings and vast irrigation works remain as relics of a high standard of ancient civilization. It now ranks as the premier Crown Colony and has attained a state of great prosperity.

## PRINCIPAL LANGUAGES.

Sinhalese and Tamil are the two chief vernacular languages in the Island, the former belonging to the Sinhalese who chiefly inhabit the western, central, and southern portions of the Island, and the latter to the Tamils inhabiting the northern and eastern parts and to the immigrant estate population. English is the language in general use among the people of the upper and the middle classes of all communities.

### CURRENCY.

The monetary unit in Ceylon is the Indian silver rupee, which is divided into 100 cents. The following fractions of the rupee are coined :—(1) Silver, 50-cent piece ; 25-cent piece ; and 10-cent piece ; (2) nickel, 5-cent piece ; (3) copper, 1-cent piece and  $\frac{1}{2}$ -cent piece.

The chief medium of exchange in Ceylon is the currency notes issued by the Government of Ceylon. They are of the following values :— Rs. 1,000, Rs. 500, Rs. 100, Rs. 50, Rs. 10, Rs. 5, Rs. 2, and Re. 1. The last two notes were issued during the war to replace the silver rupee for export to India to pay for imports, chiefly of rice, and very few silver rupees are now to be seen in use in Ceylon.

### WEIGHTS AND MEASURES.

The standard measure of weight is the Imperial standard pound avoirdupois, the standard linear measure is the Imperial yard, and the standard measure of capacity is the Imperial gallon.

In measuring the weight of copra and cinnamon the “candy” (= 560 lb. or  $\frac{1}{4}$  ton) is commonly used.

In measuring distance and length, the “fathom” (= 6 feet), and the “cubit” (= 18 inches) are also commonly used in addition to the mile, chain, yard, foot, and inch which are in general use.

In measuring capacity, the principal dry measure is the English bushel, but in conjunction with this is used a number of local measures, of which the connotation is sometimes uncertain and the usage variable. For measuring liquid capacities, the English measures of the gallon, the quart, and the pint are in general use. The “bottle”—6 to the gallon—is a common measure of milk, and kerosine, coconut, and citronella oils.

In measurements of area, the acre, rood, and perch are in general use, but the Ceylonese practice of using the dry measures also to denote the area of lands which can be sown with that quantity of seed is still common. Thus, the amunam, besides being a dry measure of about 5 bushels, will represent the acreage which could be sown with that amount of seed. This is evidently a somewhat varying amount, but is generally taken for mud land at 2 to  $2\frac{1}{2}$  acres and for high land at 4 to 5 acres, according to the practice prevailing in each district.

## I.—General.

THE year under review, though not characterized by any particular boom in the staple industries of the Island, was generally a very satisfactory one. The revenue collected during the financial year ending September 30, 1927, amounted to Rs. 129,358,916—nearly five million rupees in excess of the figure for the previous financial year, which was in itself a record. The expenditure during the same period was Rs. 123,621,897—Rs. 10,678,075 more than that for the previous financial year. On September 30 the assets of the Colony showed an excess of Rs. 49,696,243 over its liabilities. This accumulated surplus is in excess of the surplus shown on September 30, 1926, by nearly 5½ million rupees.

The value of total trade during the calendar year amounted to Rs. 854,399,419 (excluding postal articles, ships' stores, and specie). This figure shows a decrease of Rs. 44,107,271 when compared with the figure for 1926, but is larger than that of any other year in the history of the Colony. The total imports amounted to Rs. 406,663,779, an increase of Rs. 11,419,538 over the figure for the previous year. The total exports amounted to Rs. 447,735,640, which is Rs. 55,526,849 less than the figure for 1926, and Rs. 44,753,656 less than that for 1925. Thus the imports of the Colony have shown an increase and the exports a decrease, but the exports still exceed the total imports.\*

As in the last few years there has been an expansion under most heads of imports, and the export trade continued in a flourishing state. The tea industry had a very prosperous year, the total exports of black and green tea (including ships' stores) amounting to a little over 227 million lb., which is nearly 10 million lb. more than the figure for 1926. This increase of crop was partly due to a generally favourable season, but also largely to the continued attention paid to improved methods of cultivation and to the continuance of liberal manuring programmes. On the other hand, the ruling prices during the year were somewhat lower than those of 1926, the average price for local sales being 94 cents per lb., as against 99 cents during the previous year. Thus the total value of exports amounted to Rs. 213,774,632, which shows an increase of only Rs. 610,749 over the figure for the previous year.

The Stevenson Scheme of Rubber Restriction was in operation throughout the year, the percentages of release (during the restriction period, November 1, 1926, to October 31, 1927)

\* Notes on the principal import and exports will be found in Chapter IV., pages 48-50

being 80 for the first quarter, 70 for the second quarter, and 60 for the third and fourth quarters. The prices of rubber have shown a gradual decline, although the ruling rates have been more or less uniform during the year. There were periods of slight fluctuations, but the tone of the market on the whole was weak and uncertain throughout the year. The total value of the exports amounted to a little over 129 $\frac{3}{4}$  million rupees, as against nearly 184 $\frac{1}{2}$  million rupees during the previous year.

The total value of the exports of coconut products amounted to nearly 76 $\frac{3}{4}$  million rupees or a little over 2 million rupees less than the figure for 1926. This decrease is accounted for mainly by a short-fall in crops, particularly in the second part of the year, as the result of an insufficient rainfall during the previous twelve months. This fall in exports attracted attention and resulted in an investigation being made of the exports of coconut products during the past sixteen years. Statements showing the results of this investigation appear on pages 19-20. With effect from January 16, 1927, the export duty on desiccated coconut was reduced from 70 to 65 cents per cwt. and that on coconut oil from 75 to 65 cents per cwt.

Cacao and cinnamon showed considerable improvement both in the quantities as well as the values of the exports. But the year was a most disappointing one for citronella growers. The prices ruled low, and for some time it was difficult to dispose of stocks at remunerative prices.

As regards plumbago there was a noticeable increase in the quantity exported, while the value of the exports was even less than that of the previous year, the average price per ton being Rs. 196 in 1927, as against Rs. 225·20 in 1926.

Paddy and other cultivations which are dependent on weather conditions were generally satisfactory throughout the Island, except in some of the dry zone areas, where the rainfall was not satisfactory. Unseasonable rains are reported to have had an adverse effect on paddy cultivation in Mullaittivu, Batticaloa, Trincomalee, and Kurunegala Districts. In Hambantota District shortage of buffaloes and adverse weather conditions resulted in a reduction of the area cultivated with paddy. In Anuradhapura District the second or "yala" chena crops were spoilt by unseasonable rains. The Agricultural District Committees have made continued efforts to increase the production of foodstuffs and to encourage the adoption of improved methods of cultivation.

The cotton cultivation introduced into Hambantota District some years ago is now carried on on a fairly large scale by villagers, chiefly on Crown land leased to them on a nominal



rent. This cultivation is also being taken up on a small scale with encouraging results in the Wellassa, Wellawaya, Bintenna and Viyaluwa divisions of the Province of Uva and at Embilipitiya in Ratnapura District.

The growing of papaw as a catch crop is increasing in Kurunegala and Kegalla Districts.

The turn-over of the Kalutara Basket Society has shown a marked drop after last year's record figures. The decrease in business is probably due to the competition of Colombo dealers, who buy direct from the makers and demand a less high standard of quality.

Education has made steady progress during the year. There were noteworthy increases in the numbers of Government as well as assisted, schools, and they showed a corresponding increase in the number of pupils attending them. There was an increase of 766 in the number of teachers employed during the year over the figure for 1926. The nett cost to Government of subsidizing education in the Island during the year was Rs. 8,040,798. The total number of pupils attending Ceylon schools in 1927 is reported to have been approximately 58 per cent. of the number of children of school-going age at the last Census. There remains much to be done in the matter of equipment, &c., in English schools. The permanent accommodation provided in vernacular schools has not kept pace with the increasing attendance, temporary buildings being necessary in many cases to relieve the congestion.

As in previous years, the Government offered five scholarships on the results of the B.A. and B.Sc. Examinations of the University of London. These scholarships are of the value of £300 per annum each, with free passage and outfit allowance of £50, tenable at any British University or any recognized Engineering Institution in the United Kingdom. It was also decided during the year to offer, for the first time, two scholarships—one to a boy and the other to a girl—for competition annually among the children of garrison ranks who are entitled to free education in the British Army School in Ceylon.

Although malaria is still prevalent in the dry zone, there was an improvement in the general health of the people throughout the year, due possibly to a large extent, to determined efforts made of recent years to improve sanitary conditions and to counteract the ill-effects of malaria and anchylostomiasis.

There were mild outbreaks of sore-eyes, dysentery, chicken-pox, influenza, and measles in some districts. In Colombo there were 83 cases of plague with 76 deaths, as against 13 cases

with 12 deaths in 1926. This increase is probably due to fresh infection from abroad. There was also an outbreak of plague in Kandy town during the latter part of the year. The disease was stamped out within three months by the prompt measures taken.

Parangi ("Framboesia" or "Yaws") is being steadily eradicated by the patient efforts of Itinerating Medical Officers. The number of births registered during the year was 205,470; the number of deaths was 113,007; the latter is the lowest annual figure on record since 1916.

An examination of the statistics relating to crime shows that offences against the person (excluding robbery) have increased of recent years. A characteristic feature in offences against property during the year was the increased use made of rapid means of conveyance, chiefly motor vehicles, and of the use of electric torches by burglars and other criminals. The number of cases of gang robbery committed during the year was 21, compared with 9 in 1926 and 26 in 1925.

Seventy-three arrack taverns, 72 toddy taverns, 15 foreign liquor shops, 6 hotel bars, and 1 beer and porter tavern were abolished during the year by local option polls. The Hambantota District has been made an entirely "dry area" owing to the successful activities of the temperance workers. The consumption of arrack in Ceylon in 1927 was 752,031 gallons; of toddy, 4,501,608 gallons. The figures in 1926 were 846,085 gallons and 4,264,516 gallons respectively. 224,093 gallons of malt liquor, 61,205 gallons of wines, and 343,270 gallons of spirits were imported during the year, while the Nuwara Eliya Brewery manufactured 164,447 gallons of beer. The drink bill of Ceylon for 1927 is estimated to be a little over 28 million rupees.

4,244 vessels with a total tonnage of 12,719,600 tons entered the ports of the Island in 1927, as against 4,053 vessels with a tonnage of 11,875,547 in 1926.

On September 30, 1927, there were 895 miles of railways open for traffic—an increase of 44 miles over the previous year. The light railway from Maho on the Northern line to Batticaloa and Trincomalee on the east coast of the Island has now been completed. The last section of this line, viz., that from Polonnaruwa to Batticaloa, was opened for goods traffic on January 4, 1928, and for all traffic on March 12, 1928.

The total length of roads maintained by the Public Works Department was 4,238 miles. Of these, 3,644 miles were metalled roads, 390 miles gravelled roads, and 204 miles natural roads.

In February about 5,000 coolies working in Colombo Harbour and wharves struck work as their demands for higher wages were refused. They remained on strike for nearly three weeks. The strike was eventually terminated by a settlement brought about by an Arbitration Board on an improved basis of payment.

An event of great importance in the political history of the Island was the arrival of a Special Commission to inquire into the working of the existing Constitution and to advise the Secretary of State for the Colonies in what direction and to what extent the Order-in-Council of 1924 should be amended. The personnel of the Commission comprised the Right Honourable the Earl of Donoughmore, K.P., P.C. (Chairman), the Right Honourable Sir Matthew Nathan, G.C.M.G., P.C., Sir Geoffrey Butler, K.B.E., M.P., and Dr. Drummond Shiels, M.C., M.P., whilst Mr. P. A. Clutterbuck, M.C., acted as Secretary. The decision of the Commission to hold public sittings was welcomed by all interested parties. The Commission left Ceylon early in 1928, having spent a little over two months in this Island and having obtained evidence in Colombo, Galle, Kandy, Jaffna, and Batticaloa.

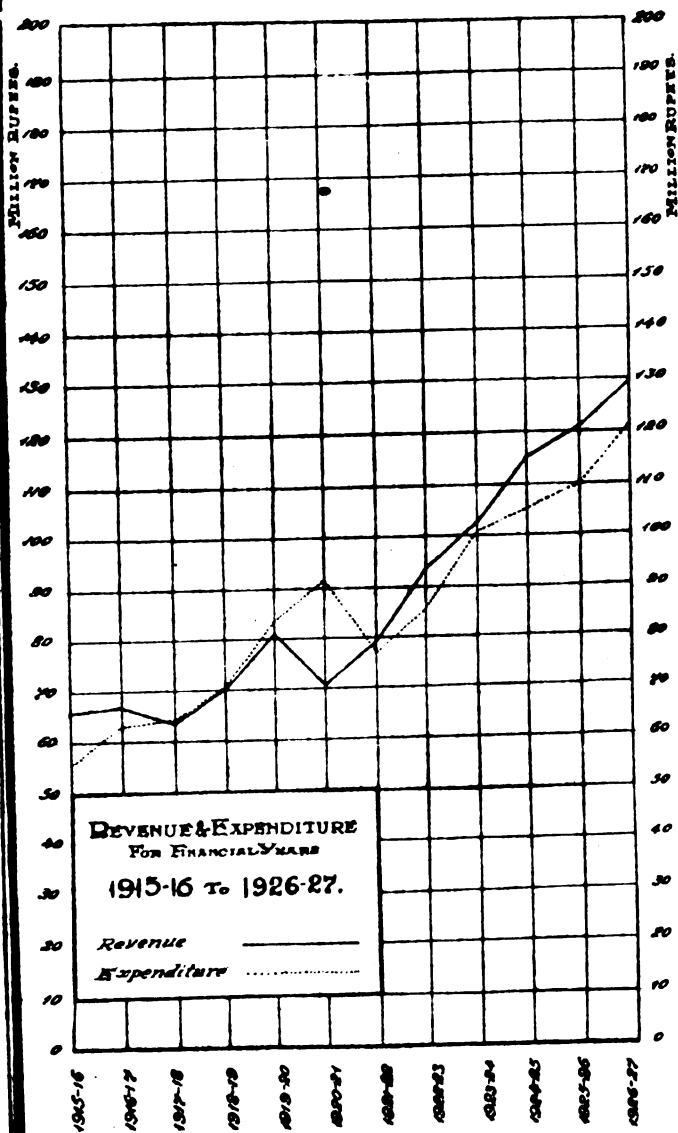
## II.—Finance.

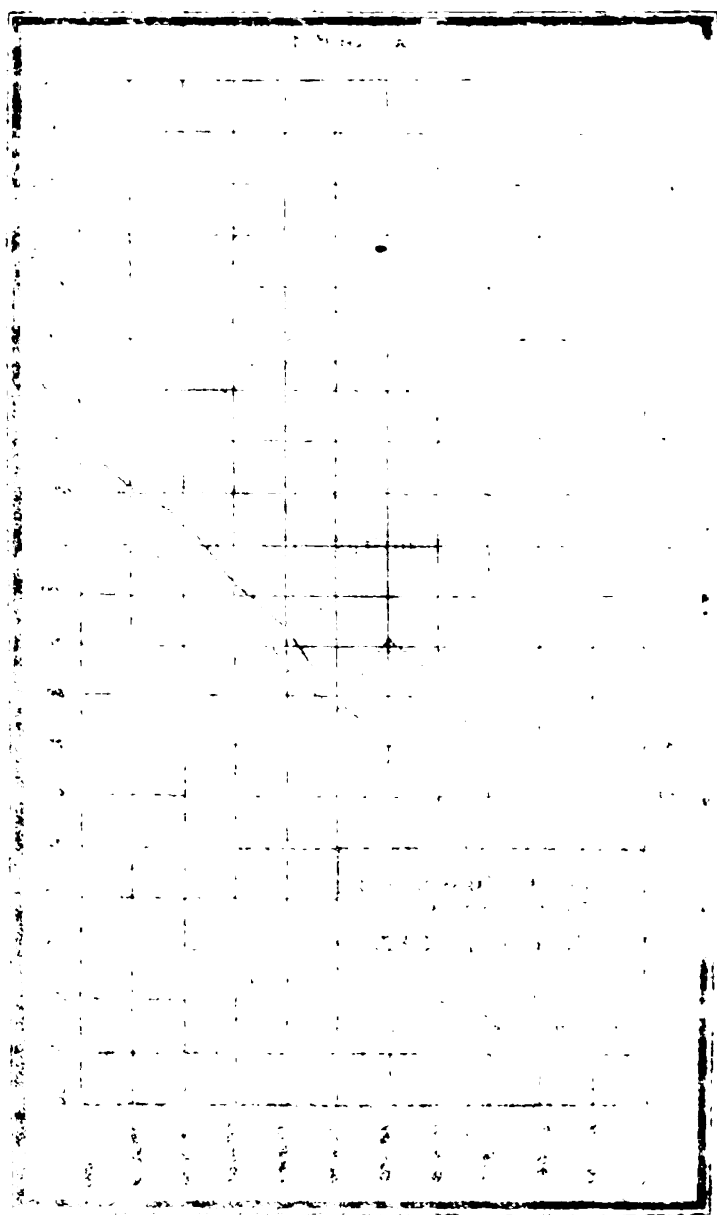
### REVENUE.

THE revenue collected during the financial year ended September 30, 1927, amounted to Rs. 129,358,916·31 which was Rs. 14,358,916·31 more than the estimate, and Rs. 4,842,761·27 more than the amount collected in the previous financial year. The principal increases over the previous financial year were under Customs Rs. 3,086,313. Harbour Dues Rs. 210,590, Warehouse Rent Rs. 107,963, Salt Rs. 179,334, Arrack Rs. 1,909,916, Estate Duties Rs. 186,736. Railway Receipts Rs. 953,028, and Interest Rs. 562,354. aggregating Rs. 7,196,234. Against these increases the following sums representing decreases should be deducted: —Revenue of Oil Installations Rs. 228,087, Miscellaneous Receipts, Sundries (gain on exchange) Rs. 1,379,705, and Land Sales Rs. 751,084. aggregating Rs. 2,358,876.

The increased Customs and Railway Receipts and Port and Harbour Dues indicate improved trade conditions.

DIAGRAM No 1





During the year under review the rates of duty payable on states not exceeding Rs. 75,000 in value under the Estate Duty Ordinance, No. 8 of 1919, were reduced. The "Ceylon Post Office Ordinance, 1908," was amended, reducing the rates of postage on letters, printed matter, and open packets. Railway fares on first class tickets were also reduced during the year.

The revenue for the last five financial years is as follows :—

1922-23.		1923-24.		1924-25.		1925-26.		1926-27.	
Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.
93,720,169	33	102,363,115	67	115,539,669	56	124,516,155	4	129,358,916	31

### EXPENDITURE.

The expenditure for the financial year ended September 30, 1927, which was estimated at Rs. 131,155,438, amounted to Rs. 123,621,897·04, which includes a sum of Rs. 2,575,597·43 on account of expenditure on works temporarily chargeable to Revenue pending raising of Loan Funds. This expenditure exceeded the expenditure of the previous financial year by Rs. 10,678,075·36. The increase was mainly due to larger expenditure under the following heads :—Survey, Colombo Port Commission, Excise, Post Office and Telegraphs, Department of Medical and Sanitary Services, Education, Railway, Public Works Department, Public Works Extraordinary, Pensions, and Miscellaneous Services ; and to the expenditure incurred on the new Railway workshops chargeable to Revenue pending raising of Loan Funds. Against the increases under these heads decreases occurred under the following heads :—Treasury, Commissioners of Currency, Railway Extraordinary Works, Public Debt, and on the Hydro-Electric Scheme.

The expenditure incurred during the last five financial years is as follows :—

	1922-23.		1923-24.		1924-25.		1925-26.		1926-27.	
	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.
Expenditure chargeable to General Revenue, including accumulated Surplus Balances	85,583,909	72	100,695,713	5	105,004,348	17	109,996,335	63	121,046,299	61
Expenditure chargeable to Revenue pending raising of Loan Funds	—		18,155	72	1,361,336	67	2,947,486	5	2,575,597	43
	85,583,909	72	100,713,868	77	106,365,684	84	112,943,821	68	123,621,897	4

### ASSETS AND LIABILITIES.

The assets of the Colony on September 30, 1927, were Rs. 79,475,507·92, and the liabilities Rs. 29,779,264·88, showing an excess of assets over liabilities of Rs. 49,696,243·03. This accumulated surplus was in excess of the surplus shown on

September 30, 1926, by a sum of Rs. 5,737,019·27. The assets consisted of cash in fixed deposits and current accounts in local and Indian banks and with the Crown Agents in London, unissued stores, investments in rupee and sterling gilt-edged securities, and sundry recoverable advances. The main liabilities represent amounts due to the Widows' and Orphans' Pension Fund, Ceylon University Building and Equipment Fund, the Loan Account, and Court Suitors and other depositors in the Treasury and local Kachcheries. The cash balances available amounted to Rs. 49,232,423·81.

### CURRENCY.

On September 30, 1927, the value of the currency notes in circulation amounted to Rs. 62,474,607. The Currency Commissioners on this date held silver rupees to the extent of Rs. 25,047,543, and British, Indian and Colonial Securities amounting to Rs. 44,836,101 (cost price), or Rs. 42,572,209 (market price). The value of the reserve on September 30, 1927, was thus in excess of the value of notes in circulation by Rs. 5,145,145.

During the year silver rupees to the extent of Rs. 1,200,000 were received from the Imperial Bank of India in exchange for currency notes.

The following amounts of the various denominations of subsidiary coin were in circulation in the Colony on September 30, 1927 :—

	Rs.		
Fifty-cent (silver) .. ..	..	..	5,059,000
Twenty-five cent (silver) .. ..	..	..	3,393,750
Ten-cent (silver) .. ..	..	..	3,373,212
Five-cent (nickel) .. ..	..	..	747,200
One-cent (copper) .. ..	..	..	1,044,137
Half-cent (copper) .. ..	..	..	325,469

### PUBLIC DEBT.

On September 30, 1927, the sterling debt of the Colony stood at £12,657,393 and the rupee debt at Rs. 3,000,000, towards redemption of which were held securities and moneys amounting to £3,903,841 and Rs. 1,600,637, respectively.

Setting off the securities against the debts and effecting conversion of Rs. 15 to the pound sterling, the nett total Public Debt of the Colony amounts to Rs. 132,702,643, which is more than the revenue for the year ended September 30, 1927, by Rs. 3,343,727.

A statement of the loan position of the Colony as it stood on September 30, 1927, is annexed.

# Summary of the Public Debt, 1926-27.

## FINANCE.

11

Description of Loan.	Amount.	Equivalent at £1 = Rs. 15.	Investments held on behalf of the Sinking Fund.			Amounts in Deposit with Westminster Bank and Balance in hand pending Investment.	Total (of Columns 5 and 6).	Equivalent at £1 = Rs. 15.						
			Face Value of Securities.	Purchase Price.										
1	2	3	4	5	6	7	8							
	£.	s.	d.	£.	s.	d.	£.	s.	d.	Ra.	c.			
Debentures unredeemed ..	18,300	0	0	—	—	3,445	8	2	3,445	8	2	51,691	12	
4 per cent. Inscribed Stock (Debentures converted), 1934 ..	1,076,100	0	0	1,049,350	11	1	988,890	13	11	3	12	0	14,833,414	44
3 per cent. Inscribed Stock, 1940 ..	2,850,000	0	0	1,803,371	6	1	1,658,572	12	4	4,564	1	2	24,947,050	12
3½ per cent. Inscribed Stock, 1959 ..	1,500,000	0	0	369,096	17	1	311,147	18	10	76	16	6	4,668,371	50
4 per cent. Inscribed Stock, 1959 ..	1,000,000	0	0	157,465	16	7	130,187	6	2	7	4	0	1,952,917	63
6 per cent. Inscribed Stock, 1936-51 ..	6,212,993	8	4	467,603	6	2	482,791	8	11	48,356	8	9	7,974,718	25
	12,657,393	8	4	3,846,887	17	0	3,571,590	0	2	56,953	10	7	54,428,153	6
per cent. Ceylon Inscribed Stock, 1944 ..	—	3,000,000	0	53,265	16	10	53,721	18	7	—			805,828	94
				Rs. 800,600-00			Rs. 981,535-76			Rs. 1,049-52			982,585	28
													56,216,567	28



## CEYLON SAVINGS BANK.

The Ceylon Savings Bank had a sum of Rs. 6,944,531\* to credit of 50,086 depositors on December 31, 1927, as against Rs. 6,547,687 to credit of 48,008 depositors on December 31, 1926. The amount of the Bank's invested funds on December 31, 1927, was Rs. 7,611,030, which include investments made from the Reserve Fund of Rs. 858,443.\* The interest paid to depositors amounted to Rs. 216,228.\* Interest was allowed at the rate of 4 per cent. on accounts of Rs. 1,000 and under, and 3 per cent. on accounts above Rs. 1,000.

Accounts may be opened with a minimum deposit of 50 cents, and not more than Rs. 1,000 can be deposited in one year irrespective of withdrawals. The maximum sum that a depositor may have to his or her credit is Rs. 3,000. Charitable institutions or societies may deposit Rs. 2,500 per annum up to a maximum of Rs. 7,500.

Parents or legal guardians may make deposits on behalf of their minor children and have control over the accounts until the minors attain majority.

The amending Ordinance to raise the limit of deposits fixed by section 19 of Ordinance No. 12 of 1859, referred to in the last report, is still in the hands of the Attorney-General. If the proposed amendment is passed by the Legislative Council, it will admit of a sum of Rs. 2,000 being deposited in one year up to a maximum of Rs. 6,000 in three years by individual depositors, and in the case of charitable institutions or societies of a sum of Rs. 3,000 up to a maximum, including interest, of Rs. 9,000 in three years.

The Bank lends money on the primary mortgage of house property within the Municipal limits of Colombo to the extent of half its appraised value at a flat rate of 7 per cent. interest per annum. Borrowers are required to pay a fee of Rs. 21 for the examination of title, and to execute a mortgage bond and warrant of attorney to confess judgment, and to effect a fire assurance policy over the property mortgaged for the total extent of the loan. Easy terms of repayment are allowed, and borrowers have the advantage of not being charged with stamp duty on the bond, &c., in terms of the Bank's Ordinance.

The business hours of the Bank are between 10 A.M. and 3 P.M. on week days and 10 A.M. and 1 P.M. on Saturdays. Deposits and withdrawals may be made between 10 A.M. and 2 P.M. on week days and 10 A.M. and 12 noon on Saturdays.

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\*Approximate.

## STAMP DUTIES.

(a) During the financial year 1926-27 a sum of Rs. 8,905,735·25 was credited to revenue by the sale of stamps, as against Rs. 9,756,198·31 credited during 1925-26. Of this a sum of Rs. 4,687,658·53 represents stamps sold for postal purposes, and the balance, Rs. 4,218,076·72, stamps issued for revenue purposes, such as payments of stamp duties on instruments, duties on legal proceedings, and licence fees. The decrease is probably due to the effect of Ordinance No. 14 of 1925, which authorizes the collection of revenue in cash instead of stamps. With regard to certain items the Post Office itself makes its collection in cash, and not in stamps.

(b) Stamp duties on bank cheques and share certificates are, under section 5 of the Stamp Ordinance, No. 22 of 1909, payable in cash, as composition duty, by banks and companies authorized in that behalf by the Governor in Executive Council. The revenue so derived during the year 1926-27 amounted to Rs. 230,565·59, as against Rs. 247,893·07 during the previous year.

(c) 4,179 instruments executed outside the Colony, but requiring to be stamped in Ceylon under section 42 of the Stamp Ordinance, were stamped during the year 1927, as against 4,175 during the previous year, and the revenue derived from this source out of the total sum mentioned in paragraph (a) above is Rs. 44,106·27, as against Rs. 42,284·73 during the previous year.

## ESTATE DUTIES.

Estates of persons whose deaths occurred on or after July 1, 1919, are chargeable with duty under the Estate Duty Ordinance, No. 8 of 1919. During the financial year 1926-27 a sum of Rs. 2,122,053·14 was collected as estate duty, as against Rs. 1,935,317·24 in the previous year. With the exception of the year 1924-25, in which the revenue, Rs. 3,000,255·05, was abnormally high owing to a sum of Rs. 1,833,265·51 having been paid in respect of a single death, the revenue for the year under review is the highest since the commencement of the Ordinance. In respect of deaths which had occurred prior to the commencement of the Ordinance a sum of Rs. 7,310 was collected as stamp duty on probates and letters of administration during the financial year 1926-27, as against Rs. 12,358 during the previous year.

The total amount of penalties recovered under the Ordinance, in respect of 213 cases, was Rs. 1,522·50, as against Rs. 2,030 recovered during the previous year in 282 cases. This is a favourable sign, indicating that the Ordinance has always been worked without overmuch resort to penal measures.

### III.—Production.

#### AGRICULTURE.

##### TEA.

**T**HE total exports of tea amounted to 225,045,992\* lb. of black tea and 1,991,864\* lb. of green tea of a total value of Rs. 213,774,632,\* as against an export of 215,819,449\* lb. of black tea and 1,364,217\* lb. of green tea of a total value of Rs. 213,163,883\* in 1926. This further increase of crop was due to a generally favourable season, but more largely to the continued attention to cultivation methods and to the continued adoption of liberal manuring programmes. A marked feature in recent years has been the gradually increasing crops secured from all well-managed estates as the result of improvements in cultivation. These larger crops have been secured without any fall in quality, and particular attention continues to be given to the production of fine teas of high quality. Prices were somewhat lower than in 1926, the average price for local sales being 94 cents per lb., as against 99 cents per lb. during the previous year. High-grown teas have throughout the year commanded a ready sale at good prices, but prices for low-grown teas were at times lower than during the previous year. In the last quarter of the year there was a general increase in the prices of all grades, and confidence in the continued prosperity of the industry is undiminished. New lands are being opened up, but the areas of such new lands are restricted in extent. Factory improvements continue to be made, and engineering firms have had a busy year in re-modelling and enlarging existing factories and in the erection of new ones. Controlled withering still continues to receive special attention, and this is assisting in maintaining an even wither and in improving qualities of teas. Numerous visitors from the tea-growing districts in North India visited Ceylon factories during the year, with a view to adapting some of the Ceylon factory methods to Indian conditions.

Tea generally looks healthy and vigorous. Certain changes are being tried in the treatment of young tea, and pruning systems are the subject of experiment. There is a growing tendency towards favouring a lighter system of pruning, and manuring is now being carried out at more frequent intervals. These changes seem to be resulting in increases of crops, and the trials that are being made on a considerable number of estates are being watched with interest. The attention of the industry is also being directed to the experiments being carried on by the Department of Agriculture in growing creeping cover crops in

\*Including ships' store.

# CEYLON

Scale, 24 Miles to an Inch

MILES 24 12 6 0 24 MILES

1:500,000

## REFERENCE

- ROADS
- RAILWAY EXISTING
- RAILWAY UNDER CONSTRUCTION
- UNDER SURVEY
- PROVINCIAL BOUNDARY
- DISTRICT BOUNDARY
- RAINFALL (1927 AVERAGE CURVE)
- TEMPERATURE



- EXISTING
- PROPOSED
- BOTANICAL GARDENS
- MAJOR EXPERIMENT STATIONS
- MINOR EXPERIMENT STATIONS
- MUSEUM BLOCKS





as a preventive of soil erosion, and a number of estates are now making similar trials. There is little doubt that the future stability of the industry from an agricultural point of view depends upon the solution of the soil erosion problem and the increase of the organic matter in the soils.

Tea Tortrix was severe in its attacks during the year, and it was decided to have this pest scheduled, and the collection of egg-masses, larvae, and pupae made compulsory. Tea termites are still under investigation. These pests have caused considerable damage in some areas, and their treatment constitutes a serious problem. It is probable that by the treatment of wounds, with a view to prevention of wood rot, and by the stimulation of callus formation by liberal manuring around the time of pruning the solution of the problem may be found. Various trials are being made, but nothing definite has yet been ascertained. The leaf disease caused by *Cercospora theae* was serious in some areas, and estates in the "mist-zone" have been recommended to remove the acacias which they were growing as green-manure plants on account of the frequency of the spread of the disease from them to the tea. Root diseases still continue under investigation, and further data in regard to the distribution of *Rhizoctonia* have been secured. Soil investigations continue to be made, and research work on the leaching of manures and the nitrification of nitrogenous fertilizers and of green manures is being carried on.

The total number of tea plants transferred under permit from the Department of Agriculture during the year was 4,555,479, as against 4,451,877 during the previous year.

The housing of estate labour continues to be improved, and during the year Ordinance No. 27 of 1927 amending "the law relating to Indian labourers" was passed by the Legislature. This Ordinance prescribes for a standard wage of Indian immigrant labour and for a regulation of their conditions of labour. Infant welfare work on estates continues to progress, and the education of children of estate labourers is receiving attention. The anti-malarial work by the medical adviser, supported by tea and rubber estates, has made progress and some interesting results secured.

The Tea Research Scheme has not yet been able to secure an estate for experimental purposes, and in consequence its work has had to be carried on in temporary quarters.

#### RUBBER.

The exports of rubber amounted 60,728 tons of a value of Rs. 129,757,640, as against 63,621 tons of a value of Rs. 184,423,215 during 1926. The export of latex amounted to 250 gallons of a value of Rs. 997.

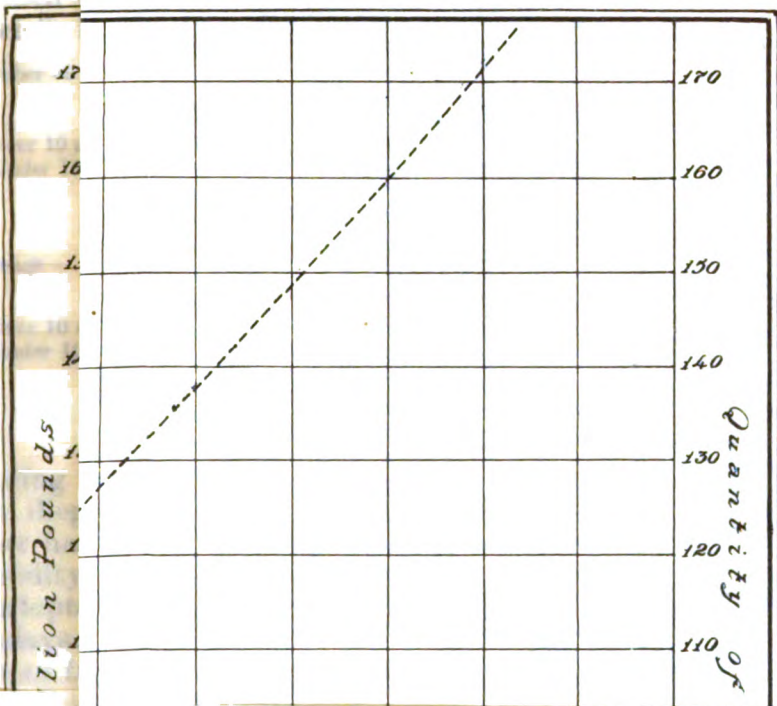
*The Working of the Rubber Restriction Ordinance during  
Restriction Period, November 1, 1926, to October 31, 1927.*

The restriction scheme continued to be in force throughout the year, and the percentages of release for the various quarters were—

1st quarter 80 per cent.	3rd quarter 60 per cent.
2nd quarter 70 per cent.	4th quarter 60 per cent.

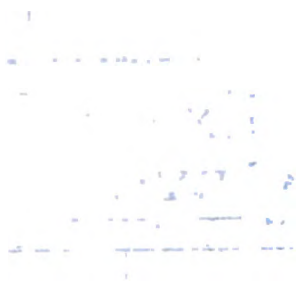
The total standard production for the rubber estates of Ceylon was 73,839 tons, and the exportable maximum for the year amounted therefore to 49,842 tons. The quantity actually exported was 57,875 tons, a quantity much in excess of the exportable maximum, and the necessary export certificates were obtained by the use of the unused certificates outstanding at the end of the previous restriction year. The quantity of unused certificates outstanding on October 31, 1927, was 1,118,400 tons, and by January 31, 1928, was further reduced to 660,000 tons. The accumulation of unused certificates during 1926 has given rise to a general impression that the rubber estates of Ceylon have been over-assessed. In this connection it is interesting to consider the figures of production since 1909, and to attempt to discover what the figures ought to have been had no restriction intervened. The chart facing this page shows the actual export figures from 1909–1922, and the dotted line shows the form the curve would have taken in the ordinary course. It will be seen that the export figures for 1926 would have been 160,000,000 lb. as compared with a standard production of 159,118,400 lb., and for 1927 172,000,000 lb. as compared with a standard production of 160,060,160 lb. The surprising close agreement of the two sets of figures needs no emphasis. It is evident that in 1926 the estates, after years of restriction, could not immediately jump to full production, and, moreover, after only nine months on 100 per cent. production restriction was enforced again. The charge of failure on the part of Ceylon in the administration of the scheme based on the evidence of the accumulation of certificates in 1926 has not been substantiated. This charge is based on the conception that the rubber-producing areas are of the nature of a capacious reservoir from which in any quarter 100 per cent. or 60 per cent. of the production can be drawn at will—a conception which it is unnecessary to emphasize is not in accord with the facts.

The acreage under rubber is now estimated at 498,662 acres, of which 433,662 acres are in estates over 10 acres in extent and 65,000 acres under 10 acres. The figures showing the number of registered estates and their acreage for the previous years



secondary learning. It is believed that the





previous years

follows, and it will be seen that the acreage under rubber has increased considerably since the introduction of restriction, especially in the case of the estates under 10 acres in extent :—

Number of registered estates—

	1922-23.	1923-24.	1924-25.	1926.	1927.
Over 10 acres ..	3,944 ..	4,250 ..	4,325 ..	4,536 ..	4,840
Under 10 acres ..	20,354 ..	24,432 ..	25,340 ..	33,355 ..	34,637
	<hr/> 24,294	<hr/> 28,682	<hr/> 29,665	<hr/> 37,891	<hr/> 39,477

Acreage—

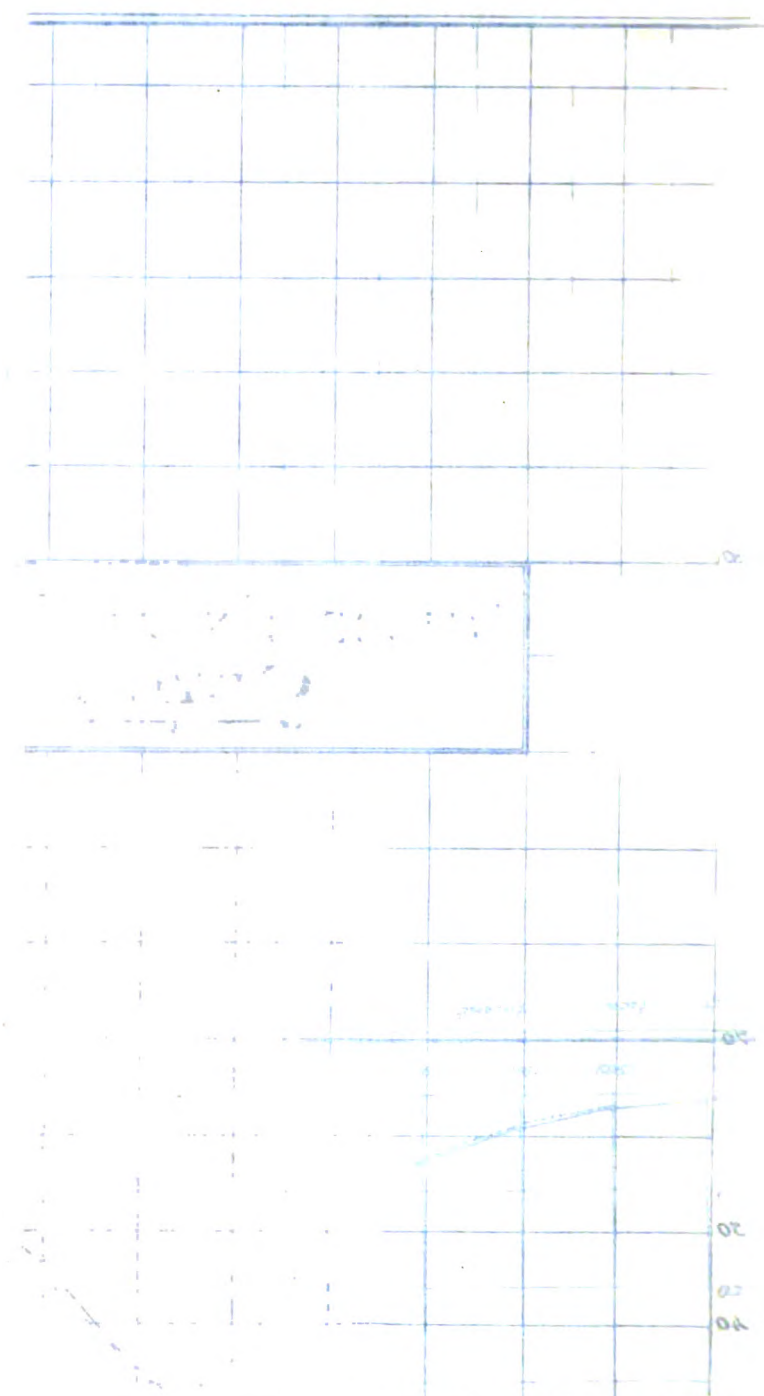
	1922-23.	1923-24.	1924-25.	1926.	1927.
Over 10 acres ..	404,297 ..	415,155 ..	418,908 ..	425,904 ..	433,662
Under 10 acres ..	38,814 ..	45,870 ..	48,522 ..	59,790 ..	65,000
	<hr/> 443,111	<hr/> 461,025	<hr/> 467,430	<hr/> 485,694	<hr/> 498,662

During the year the sale of rubber without certificates was illegal, previously only the sale of certificates without per had been illegal. The question of limiting the period of validity of the certificates was carefully considered, and was adopted, as has been done in Malaya. The circumstances in Malaya, where Singapore and Penang are free ports, are very different from those obtaining in Ceylon.

An important amendment of the Ordinance was made during the year, which provided for the immediate allocation of the use of the Rubber Restriction Fund for purposes connected with the furtherance and development of the plantation rubber industry. This amendment will enable a sum of about £300,000 to be applied immediately to schemes for the expansion and development of the plantation rubber industry. Prices of rubber were more or less uniform during the year. There were periods of slight fluctuations, but the tone of market as a whole was weak throughout and uncertain.

The quality of both crêpe and sheet rubber was well maintained, and most of the usual blemishes, such as rust and mould, were much less frequent on account of greater care being given to the methods of manufacture and of drying. The use of nitrophenol as a preventive of mould in sheet continues to be common, and formic acid has been found to be satisfactory as a preservative and is replacing acetic acid.

Secondary leaf-fall caused by *Phytophthora* was much less common during the year and in no case was serious. On the other hand, the leaf-fall caused by *Oidium*, especially in the low areas, was much more common and is causing some damage to a few estates. Practically no spraying was done for secondary leaf-fall. It is believed that the weather conditions



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Secondary leaf-fall caused by *Phytophthora* was much less common during the year and in no case was serious. On the other hand, the leaf-fall caused by *Oidium*, especially in the drier areas, was much more common and is causing some concern to a few estates. Practically no spraying was done for secondary leaf-fall. It is believed that the weather conditions

were not favourable to this disease, and it is possible that manuring has also had some influence upon the incidence of this disease. It is hoped that *Oidium* and leaf-fall may likewise be rendered less severe by liberal manuring with nitrogenous fertilizers. Brown bast continues to show an increase in the drier areas, and the percentage of affected trees on some estates is now high. The scraping method of treatment has proved to be satisfactory, and bark renewal after treatment has come up to expectations. There is, however, little doubt that the prevalence of brown bast will be a factor of importance and crop yields in the drier areas will be reduced by it.

The control of soil erosion has received further attention, and the spread of *Dolichos Hosei* as a cover crop has been considerable. This plant has shown itself to be well suited for growth under the shade of rubber and is now employed over considerable areas. The agricultural treatment of this plant is the subject of experiment, and there is little doubt that its use will extend when its value and treatment agriculturally has been further demonstrated.

Continued interest has also been taken in the selection of high-yielding strains of rubber. Plans for a definite programme of work has been elaborated during the year and several estates have combined in a programme of investigation and experiment. Yield records have been taken and steps taken for the testing of high-yielding trees as mother trees. The industry, however, favours the use of selected seed rather than bud-grafting, and during the year the Department of Agriculture had a demand for its selected seed from high-yielding trees greatly in excess of the supply.

The Rubber Research Scheme had 214 subscribers at the end of 1927, as against 211 the previous year. Its work is being increasingly appreciated by the industry.

### COCONUTS.

The exports of coconut products and their values during 1927 were as follows :—

			Rs.
Coconuts—fresh	..	18,875,750 nuts	.. 1,515,087
Copra	..	1,982,154 cwt.	.. 31,844,823
Desiccated	..	872,833 cwt.	.. 20,481,761
Oil	..	673,162 cwt.	.. 16,567,773
Poonac	..	173,155 cwt.	.. 1,241,983
Fibre—bristle	..	170,728 cwt.	.. 1,569,904
Fibre—mattress	..	356,121 cwt.*	.. 1,313,404*
Coir yarn	..	130,821 cwt.	.. 2,177,824

\*Including ships' stores.

These figures show a total fall in the value of exports of 2,072,744. This is accounted for mainly by a short-fall in exports, particularly in the second part of the year, as the result of short rainfall during the previous twelve months. This fall in exports attracted attention and resulted in an investigation being made of the exports of coconut products during the past seven years. This investigation gave the following results :—

Year.		Oil. Tons.		Copra. Tons.		Desiccated. Tons.		Fresh Coconuts.
1911	..	25,251	..	41,091	..	14,610	..	15,723,393
1912	..	20,089	..	30,704	..	13,940	..	16,010,809
1913	..	27,349	..	55,865	..	15,190	..	16,861,324
1914	..	24,314	..	70,597	..	15,593	..	11,429,594
Total	..	97,003		198,257		59,333		60,025,120
1915	..	25,075	..	60,426	..	17,450	..	5,827,669
1916	..	16,151	..	65,497	..	15,307	..	4,694,297
1917	..	21,735	..	53,935	..	13,603	..	5,289,481
1918	..	26,374	..	63,616	..	10,168	..	6,553,278
Total	..	89,335		243,474		56,528		22,364,725
1919	..	33,800	..	87,976	..	33,753	..	3,390,710
1920	..	25,376	..	67,893	..	25,937	..	9,776,479
1921	..	24,236	..	68,372	..	43,526	..	23,738,542
1922	..	27,731	..	84,329	..	38,411	..	22,317,747
Total	..	111,143		308,570		141,627		59,223,478
1923	..	24,027	..	50,773	..	40,940	..	15,693,670
1924	..	27,631	..	88,459	..	43,567	..	29,121,041
1925	..	30,890	..	113,686	..	39,708	..	23,288,786
1926	..	28,523	..	120,970	..	37,718	..	16,951,368
Total	..	111,071		373,888		161,933		85,054,865

Mr. Rutherford adopted for his conversion of oil, copra, and desiccated coconuts the following data :—

1 ton of oil	= 8,125 nuts
1 ton of copra	= 5,000 nuts
1 ton of desiccated	= 6,900 nuts

Similar data have been adopted in this survey and the following figures are obtained :—

Statement showing the Annual Quantity of Coconuts utilized in the various Products exported from Ceylon.

Year.	Oil.	Copra.	Desiccated.	Fresh Nuts.	Total.
1911	.. 205,164,375..	205,455,000..	100,809,000..	15,723,393..	527,151,768
1912	.. 163,223,125..	153,520,000..	95,186,000..	16,010,809..	427,939,924
1913	.. 222,210,625..	279,325,000..	104,811,000..	16,861,324..	623,207,949
1914	.. 197,551,250..	352,985,000..	107,591,700..	11,429,524..	669,557,474
Total	.. 788,149,375	991,285,000	408,397,700	60,025,050	2,247,857,115
Average per annum	197,037,344..	247,821,250..	102,099,425..	15,006,262..	561,964,281

Year.	Oil.	Copra.	Desiccated.	Fresh Nuts.	Total
1915	.. 203,734,375..	302,130,000..	120,405,000..	5,827,669..	632,097,044
1916	.. 131,226,875..	327,485,000..	105,618,300..	4,694,297..	569,024,472
1917	.. 176,596,875..	269,675,000..	93,860,700..	5,289,481..	545,422,056
1918	.. 214,288,750..	318,080,000..	70,159,200..	6,553,278..	609,081,228
Total	.. 725,846,875	1,217,370,000	390,043,200	22,364,725	2,355,624,800
Average per annum	181,461,719..	304,342,500..	97,510,800..	5,591,181..	588,906,200
1919	.. 274,625,000..	439,880,000..	232,895,700..	3,390,710..	950,791,410
1920	.. 206,180,000..	339,465,000..	178,965,000..	9,776,479..	734,386,479
1921	.. 196,917,500..	341,860,000..	300,329,400..	23,738,542..	862,845,442
1922	.. 225,314,375..	421,645,000..	265,035,900..	22,317,747..	934,313,022
Total	.. 903,036,875	1,542,850,000	977,226,300	59,223,478	3,482,336,653
Average per annum	225,759,219..	385,712,500..	244,306,575..	14,805,869..	870,584,163
1923	.. 195,219,375..	253,865,000..	282,486,000..	15,693,670..	747,264,045
1924	.. 224,501,875..	442,295,000..	300,612,300..	29,121,041..	996,630,216
1925	.. 250,981,250..	568,430,000..	273,985,200..	23,288,786..	1,116,685,236
1926	.. 231,749,375..	604,850,000..	260,254,200..	16,951,368..	1,113,804,943
Total	.. 902,451,875	1,869,440,000	1,117,337,700	85,054,865	3,974,284,440
Average per annum	225,612,969..	467,360,000..	279,334,425..	21,263,716..	993,571,110

The total nuts exported during the four-yearly periods specified above have been as follows:—

1911-1914	..	2,247,856,125	=	100
1915-1918	..	2,355,624,800	=	105
1919-1922	..	3,482,336,653	=	155
1923-1926	..	3,974,284,440	=	177

The war period shows but slight increases, undoubtedly due to shortage of freight and to increased local consumption during this period. It is possible that the export averages for the period 1919-1922 were higher than they would have been normally owing to the clearing out of stocks after the termination of war, but it is significant that the average export of coconut products for the four-yearly period 1923-1926 was 77 per cent. higher than for the four-yearly period 1911-1914. Mr. Rutherford, in 1922, in his calculations eliminated the year 1914 and based his percentage increases upon the average of the three years 1911-1913. He found that the production for export had shown an increase at the rate of 5 per cent. per annum. or 60 per cent. in the twelve years. Using the same basis of calculation, it is found that the average annual export for the period 1923-1926 was 189 per cent. in excess of the basic averages, or a rate of increase equal to 5·6 per cent. per annum

This steady increase is due to young plantations coming into bearing and to a higher state of cultivation. If the rate is to be continued, there is little doubt that more widespread attention must be given to better cultivation and manuring. If the total creage of Ceylon coconuts was highly cultivated, very marked increase in exports would be possible.

*Values.*

It may now be interesting to take a survey of the values of the exports over similar periods. They are as follows :—

Period.	Total Values.		Average Value per Annum.	
	Rs.		Rs.	
1911-1914	..	155,440,085	..	38,860,021
1915-1918	..	146,694,681	..	36,673,670
1919-1922	..	284,832,849	..	71,203,212
1923-1926	..	277,217,501	..	69,304,375

The ratios of these are as follows :—

1911-1914	=	100		1919-1922	=	183
1915-1918	=	94		1923-1926	=	178

These figures show clearly the higher values for coconut products in the years immediately following the termination of the war period and a return during the period 1923-1926 to what may be considered normal—the value being only 1 per cent. in excess of the amounts of the exports.

The local consumption of coconuts is not known with accuracy, but there is every reason to believe that it is annually increasing. Prices for coconut products were on the whole steady throughout the year, and there was a slight revival in the desiccated product and in consequence an increase in exports. As from January 16, 1927, the export duty on desiccated coconut was reduced to 65 cents per cwt. (from 70 cents); for coconut oil, to 65 cents per cwt. (from 75 cents).

Cultivation methods show little change. The system of monthly harrowings is now giving place to a system of less frequent cultivation with a burial of weeds and green crops. It was found that frequent harrowings showed a tendency towards the depletion of the soils of their organic matter and that crops eventually showed some reduction thereby. Trials with creeping cover crops have been begun, and there is little doubt that the use of such plants as *Dolichos Hosei* will eventually become general in the best cultivated estates. Pests and diseases call for little comment. Caterpillar was common in some parts of the North-Western Province, but was effectively controlled by the local parasites, which are being specially investigated. The Department of Agriculture issued during



the year three coloured posters dealing with coconut pests and diseases. These were widely distributed throughout the coconut-growing districts and were also supplied to schools.

### PADDY.

The north-east monsoon rains of 1926 were late and short. In consequence a short maha crop was reaped. This crop was further damaged by most unseasonal rains during the harvest season. These rains ruined much of the crop and rendered the grain largely unfit for seed purposes. In fact it was the exception rather than the rule for growers to secure their crops in a fit condition for storage for seed purposes. The yala season was, however, more satisfactory and good average crops were secured. The north-east monsoon rains at the end of 1927 were short and late. In considerable tracts, particularly in the Northern Province and in the North-Central Province, irrigation tanks were short of water, and in some areas no cultivation for the maha crop was possible. In the Northern Province rain-fed lands were sown early with the earliest showers, but, following upon these early showers there was a long severe drought and large areas of paddy crops which made an encouraging beginning died out for shortage of water. The result will be a complete failure of crops in considerable areas and the consequent shortage of the principal foodstuff.

Progress with the work being carried on by the Department of Agriculture in the production of pure-line strains of paddy is continued, and at the present time a number of selected and tested types are beginning to be available for the use of cultivators in several localities. There is a gratifying demand for these paddies, and if a satisfactory system of seed storage and distribution can be built up there is every reason to anticipate satisfactory increases in crops as the result of the use of better seed.

### CACAO.

The exports of cacao amounted to 80,798 cwt. of a value of Rs. 2,747,247, as against an export of 64,750 cwt. of a value of Rs. 1,953,684 in 1926. The year was a good one for cacao, and increased crops were obtained in all areas under this product. Prices were at a higher level than during the previous year, but did not come up to those obtained in 1925. The replacement of cacao by rubber took place on a few estates during the year.

### CARDAMOMS.

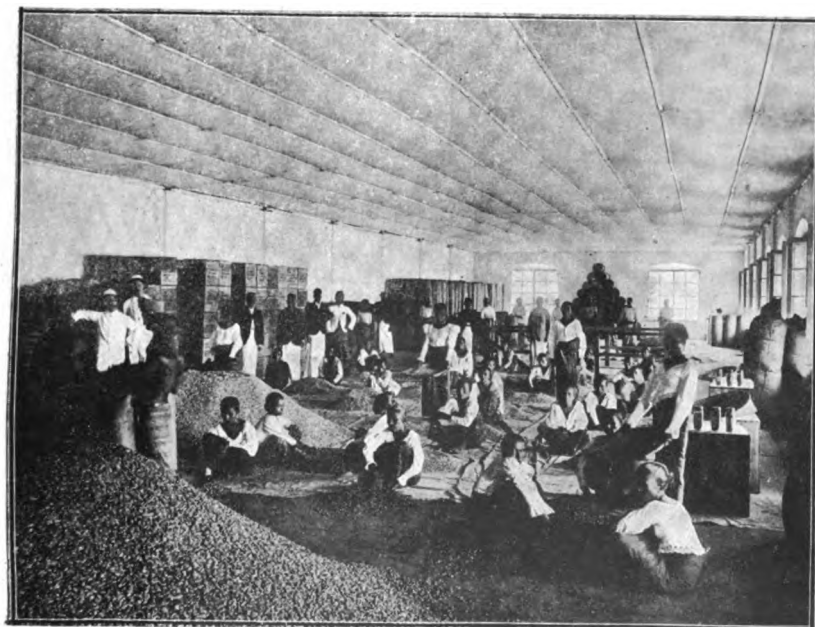
The exports amounted to 3,177\* cwt. of a value of Rs. 850,355\* as against 2,848\* cwt. of a value of Rs. 842,318\* during the

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\* Including ships' stores.

No. 2.

CACAO FACTORY : GRADING BEFORE BAGGING.



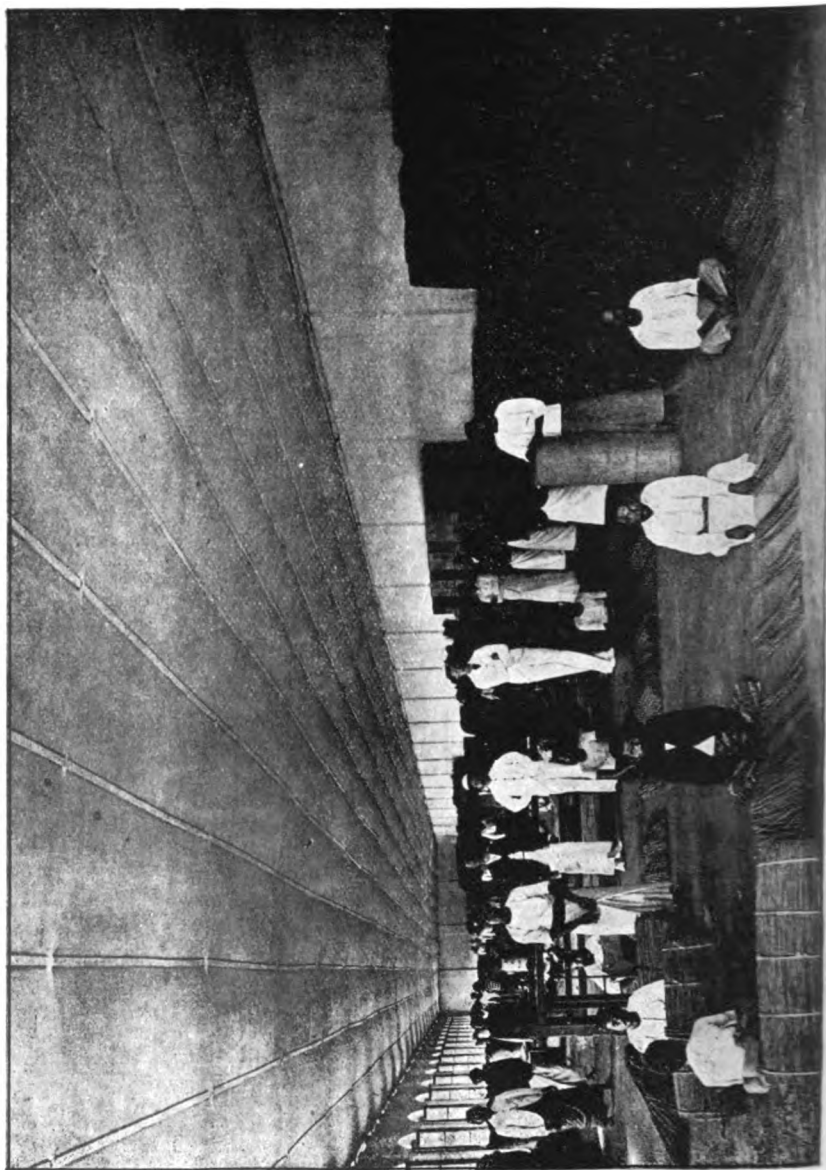
*Platé, Limited, Colombo.*





No. 3.

CINNAMON FACTORY : SORTING AND PACKING.



previous year. The prices were at a lower level during the year and the increased interest which was being shown in this product was not maintained.

#### CITRONELLA OIL.

The exports amounted to 1,358,191 lb. of a value of Rs. 1,264,745, as against 1,431,351 lb. of a value of Rs. 1,774,326 in 1926. Prices were at a low level and for a certain time it was difficult to dispose of stocks at remunerative prices. The whole year was a most disappointing one for citronella growers.

#### CINNAMON.

This product, on the other hand, had a very good year indeed. High prices ruled over a considerable period and have stimulated again an interest in the planting of cinnamon. The exports of quills amounted to 31,301\* cwt. of a value of Rs. 4,558,632,\* as against 31,241\* cwt. of a value of Rs. 3,985,238\* during the previous year; and of chips to 11,114 cwt of a value of Rs. 227,611, as against 11,874 cwt. of a value of Rs. 225,012.

#### FIBRES.

The exports of sisal hemp amounted to 4,140 cwt. of a value of Rs. 120,781, as against 5,236 cwt. of a value of Rs. 167,700 during the previous year. This reduction was due to the closing down of the Maha Illupallama estate. The Government Experiment Station at Anuradhapura produced 220 cwt. of fibre during the year, but it was unable to work for more than half the season on account of water shortage. These experiments on a small scale on the Experiment Station have been sufficiently satisfactory to warrant further trials being made in villages where dry land cultivation of a more or less permanent character is desirable.

The exports of kapok amounted to 3,320 cwt. of a value of Rs. 235,248, as against 6,045 cwt. of a value of Rs. 411,953 during 1926. The crop was considerably shorter than the previous year, but was approximately equal to that of 1925. The trials made with the best Java type of kapok have been satisfactory, and an effort is being made to establish kapok as a money crop for the village populations in the more sparsely populated areas of the dry zone.

Cotton cultivation, owing to the break in the world's prices, had to be assisted by Government. A subsidy of Rs. 5·50 per cwt. was paid by Government on all seed cotton produced. The crop, which was considerably damaged by the heavy unseasonal rains during the harvesting period, only amounted to 2,000 cwt. of seed cotton. Arrangements were made by

\* Including ships' stores.

Government to purchase the crop on behalf of the Spinning and Weaving Mills at Colombo, and the establishment of three buying stations and stores was completed in the Hambantota District during the year. Three special rotation stations were established and produced their first crops during the year, whilst work on two others was undertaken and crops in them sown for the first time with the north-east rains.

#### PAPAIN.

The exports of papain amounted to 83,416 lb. of a value of Rs. 670,974. as against 73,624 lb. of a value of Rs. 621,384 in 1926. Prices ruled high in the earlier part of the year, but they broke towards the middle and showed a considerable fall. The interest which has been stimulated in this crop is, however, being maintained.

#### ARECANUTS.

The exports of arecanuts during the year amounted to 118,278 cwt., as against 165,475 cwt. during the previous year.

#### TOBACCO.

The exports of White Burley tobacco from the Jaffna District under the Department of Agriculture purchase scheme amounted to 13,328 lb. of cured tobacco and realized prices round 1s. 5d. per lb. on the London market. These prices were lower than those realized during the previous year as the crop was during 1927 badly sun-spotted.

#### CO-OPERATION.

With the increase in the directing and supervising staff a certain amount of overhaul of the weaker societies has been possible, and a number of societies covering too large areas for their operation has been split into smaller ones. Societies which showed no response to additional attention and supervision have been liquidated. Ninety-six new societies were registered during the year, whilst the registration of 65 was cancelled, and at the end of the Co-operative year on April 30 the total number of working societies was 354. These had a membership of 35,112 with a paid-up share capital of Rs. 430,311·38 and deposits of Rs. 67,689·23. The amount standing to the credit of reserve funds of all societies was Rs. 91,421·32, and loans from Government funds amounting to Rs. 55,500 were granted during the year, making a total of Rs. 158,208·62 outstanding. Recoveries of loans have continued to show improvement, and it is to be expected that with increased inspection and supervision considerable progress should be possible.

## FORESTS.

*Revenue.*—The total cash revenue recovered by the Department in 1927, on account of timber and fuel and minor produce, and including miscellaneous revenue, rose to Rs. 873,867·72 from Rs. 699,630 in 1926 and Rs. 693,079 in 1925. It is satisfactory to note that this very substantial increase was only partly due to higher prices realized for export satinwood at the Central Timber Dépôt, transactions which give a by no means definite guarantee of continuity, and is mainly attributable to the pronounced encouragement given by the Department to buyers in the Provinces by more attractive methods of sale, which are beginning sensibly to supersede the licence system, and, more important, show every sign of continuity and development on much wider lines, as facilities come to be given for the rational exploitation, under systematic management, of the reserves and proposed reserves, which exist, or ought to exist, for the benefit of the community. The sale of individual trees, on the licence system, and fixed royalty rates, is thus giving place to the sale of the coupe, for which competition is invited, and wherever this system, applied at present mainly to forests within reasonable access of Colombo, the main consumer of timber and firewood, has been introduced, it has sprung into instant popularity and created active demand for further forest blocks. As soon as it is realized that such coupes will only be advertised once annually, and that the licence system will be suspended in forests in which the new system operates, there is no doubt that excellent prices will be realized, and that the Department will be called upon to apply the same methods in all forest areas which cater for a large demand, and are capable of being worked systematically. Four centres in the Western Division have now been added to the scheme, which has been in working for some few years in the Southern Division (West), and it is hoped in 1928 to add three fresh areas in the North-Western Division. Under the method referred to, the whole of the existing forest crop is removed and utilized, and an area made available for reforestation, either by means of coppice fellings, or planting in combination with field crops.

In addition to the development of such methods, considerable business was done by means of well advertised sales of collections of timber in local dépôts, apart from the very successful year which the established sale dépôts of the Department experienced. There are everywhere indications of steadily increasing demand, due entirely to improved business methods, rendering purchase more attractive, and the Department looks forward with greater confidence to sustained and continually increasing



demand, which alone permits of the regulated management of its forests, under correct methods of exploitation and improvement, or regeneration. The revenue derived from the sale of forest produce in 1927 is more than three times that of 1917, when the only method of sale was the inelastic licence system, and it may be safely predicted that the present revenue should easily be more than doubled in the next decade, given staff and funds for development.

The Department would far prefer the development of forest exploitation to meet the needs of the local population, than to depend on such sources of revenue as the highly artificial value of satinwood, placed on the market for export sales. During the year slightly less than 10,000 cubic feet of this material were sold, realizing the large sum of Rs. 190,758·75, or an average of Rs. 19·94 per cubic foot, while well flowered logs reached the fancy figure of Rs. 86·25 per cubic foot. At present demand appears to be sustained, and the Department will take advantage of the large resulting revenue, but it is to be feared that the prices ruling at the present day will inevitably kill the trade in due course, and it is vastly preferable to develop a steady demand for timber in ordinary use, at moderate prices, and unless this is done there may be a considerable drop in revenue in any year. The bulk of the satinwood sold finds its way to America, where flowered satinwood veneer is at the moment in great demand. The supply of this material is by no means easy. Logs of the dimensions required are only found after protracted search, and methods of extraction are primitive, while 50 per cent. of the trees, the dimensions of which are suitable for this supply, may be expected to be hollow or unsound through age. The cost of supply delivered in Colombo is in the region of Rs. 3 per cubic foot, a rate which in the case of other hardwoods is prohibitive for the purpose of local sale and local use, imported teak being preferred, or Australian hardwoods.

Regular monthly auction sales of ebony were also held at the Central Timber Depôt, Rs. 25,322 being recovered for 653 logs weighing 128 tons 8 cwt., at an average of Rs. 197·50 per ton, the highest price realized being Rs. 650 per ton. There appears to be little demand for ebony for export purposes.

By far the largest of any local transactions during the year were those at Jaffna, where the demand for firewood and building timbers realized the large sum of Rs. 170,113·55, an improvement of over Rs. 45,000 on the previous year. All material for this depôt is supplied on departmental contracts, and the division was at times hard pressed to meet the demand for firewood, which rose from 6,904 tons in 1926 to 11,363 tons in 1927. Regular monthly auctions of palu (*Mimusops*

*hexandra*) were held throughout the year, resulting in the disposal of 1,211 palu logs, or 19,539 cubic feet, at an average rate of Re. 1·94 per cubic foot. Moderate upset prices were fixed, and this timber did not suffer at all from competition with Indian and Burma teak, which was imported in considerable quantity by private enterprise.

A further noticeable feature of the year's working has been the expansion of trade in timber and firewood up-country, reflected in the transactions of the sale depôts in the Uva Division, which realized Rs. 53,008·48, or an increase of Rs. 23,449·94 over the previous year. With regard to firewood, the Department is in this division hardly affected by the sudden decision of Government to replace wood fuel with coal, while the demand for good local building timbers is likely to be only limited by the capacity of the Department to supply. It is slowly but surely coming to be realized that twenty years' concentration on supplies to Government Departments spent by the Department in the capacity of unpaid contractors to those Departments has ignored the essential requirements of the local population, which should, admittedly, claim prior attention. The Uva Division has now followed the example of a few other divisions, and, by dint of unremitting zeal, has made a solid advance in capturing local demand, by means of retail sale, at easy prices, and on fixed orders, which it is intended shortly to replace by regular auction sales, now that it is known what dimensions of sawn timber are in demand. The only apprehension felt is that the valuable timber contents of fuel areas, cut over and to be cut over, by means of clear fellings, for reforestation with timber species, will prove insufficient to meet the growing demand, before plantation grown timber can be placed on the market.

In the division referred to Departmental operations will be the order of the day, as supplies to consuming centres involve long rail transport, which can best be handled by the Department. Wherever possible, exploitation will elsewhere be carried out by purchasers, especially where navigable rivers are available. In such localities the value of forest produce may be appreciated from the sale of a coupe of 50 acres in Mitirigala reserve, adjacent to the Kelani-ganga, with direct access to Colombo. This coupe, the first of its kind in the locality, realized Rs. 11,111, or well over Rs. 200 per acre, and, in contrast to the licence system, will render a compact annual area available for reforestation. As stated, it is hoped to extend the method rapidly.

*Exploitation.*—Apart from Departmental extraction for the stocking of established depôts, the major exploitation work of

the Department was carried out, on the usual lines, to meet the requirements of other Government Departments, and consisted of the following :—7,734 broad gauge and 6,306 narrow gauge sleepers, 145,725 cubic yards of firewood, 34,520 cubic feet of sawn timber, and 180,916 cubic feet of timber in the log, while 136,230 pieces of small round timber were extracted on licences. These supplies represent a value of Rs. 678, 924·73 actual cost and Rs. 368,496·79 royalty, in all Rs. 1,116,414·80, against Rs. 1,186,845·43 in the previous year. Such supplies are thus, still the bulk of the work of the Department. Apart, however, from timber supplied in the log, and sawn bridge planks for the Public Works Department, the scope of these supplies is gradually diminishing. The sleeper supply represents balances on existing contracts only, and it is doubtful whether future exploitation will include any of these supplies, while the firewood supply to the Railway is now under constant annual reduction, and is expected to disappear almost entirely in a few years.

During the year the financial methods which have for twenty years governed the nature of supplies to Government Departments, which have hitherto secured only paper credit, at royalty rates, for the Department, came under considerable notice, in connection with certain tenders for a large contract for this purpose, with the result that a Departmental Committee has been formed to go into the whole question of placing the Department on a commercial basis, in respect of these supplies. It is perhaps not generally known that the question of supplies to Government Departments will find an important place in the deliberations of the Forestry Conference in Australia and New Zealand in 1928, at which, so far as is known at present, Ceylon is not to be represented. Much good work has been done in the way of concentrating supplies to Government Departments in selected exploitation areas, worked on an area basis, and, as far as possible, such supplies will be confined to forest areas from which timber cannot readily be marketed.

It is considered that such areas should be the only areas exploited by Government Agency for this purpose and that the rest should be reserved for competitive exploitation by purchasers, which, it is considered, is bound to come provided it receives sufficient encouragement. At present private enterprise is strangled by lack of markets.

It is plainly desirable that private enterprise should be encouraged, and it is considered that much more could be done to provide an outlet for material purchased from areas under exploitation, while it is plainly to the advantage of the Department to dispose of utilizable standing material by sale rather

an by Departmental contracts, which everywhere create embarrassment. If therefore the present method of Departmental extraction of timber for other Government Departments persists, it is considered that the Department should undertake to supply only a percentage of these requirements, and that local enterprise should be given the opportunity of supplying the balance, by the institution of the practice of calling for tenders by indenting Departments for the balance from local sources, before purchasing requirements from abroad. This would tend both to provide the Forest Department with a definite and sustained demand, and encourage local enterprise by giving an outlet for the timber, which, it is hoped, will in course of time be readily purchased from the Department.

In one instance, if not in all, timber is not supplied to contractors for the construction of Government buildings, with the result that they have to obtain their requirements from outside sources. This is usually done by entering into sub-contracts with local contractors, who apply to the Forest Department for licences to cut a few trees, in the hope of being able to obtain their balance requirements illicitly. Since the Department has, however, in the particular instance, commenced stocking and selling sawn timber of standard dimensions, such contractors are beginning to obtain their requirements from the Department direct, which is as it should be.

It is certainly preferable that the Department should confine itself to wholesale trade, where possible, and allow the retail trade to be conducted by the purchasers of coupes, and there seems to be little difficulty in this provided that such purchasers are, if necessary, given a guarantee that the Department will buy back an arranged percentage of their extracted material, for supplies to Government Departments, until they have developed sustained local markets for their purchases.

There are differences of opinion regarding the question of commercialization, but it hardly needs a second glance to realize that the present methods whereby the eyes of the forests are picked out to meet exacting Government requirements, without recovering value for such material, are not in the real interests of the country, while this single form of supply makes no attempt to cater for local requirements. In addition, as reserved forests are coming under regular exploitation, the forest capital of the country is being encroached upon, and, such supplies being on a non-payment basis, the Department is unable to obtain the necessary funds for the improvement and regeneration of the exploited areas. The Department is now going through a difficult but interesting phase, and, in order to

support its contentions, is able to produce figures showing the recent increase in trade with the public by means of more attractive methods of marketing.

*Reforestation.*—This term has been used to cover all operations for the improvement of the forest asset, and it is inadequate inasmuch as forest management is dependent on a large variety of operations other than reforestation. Reforestation, *per se*, implies a waiting period of some 60–100 years, and great faith is required to vote large sums of money for such a purpose. While the initiation of large planting schemes, with a definite objective, is an admitted necessity in certain localities, in other the present use and improvement of existing forests, by other means than planting proper, are of equal, if not greater importance, and often vastly more difficult. In any large exploitation programme, the proportion of hollow and unsound trees may be anything up to 50 per cent., and simple extraction from these overmature forests is not, in itself, in any way harmful, even if the areas receive no subsequent attention. This will not, however, suffice for the reserves which are intended to yield annual supplies in perpetuity. Thus the Department at present has to meet the demand for some 30,000 cubic feet of palu annually at the Jaffna dépôt, to say nothing of the 200,000 cubic feet of hardwoods required annually for Government Departments. The future of these supplies does not depend, to anything like the same extent, on reforestation, as it does on the correct forest management of the existing forest area dedicated to such supplies. The Department does not yet know with any degree of certainty how long such supplies will continue, and still cuts according to demand, and not according to the capacity of the forests. Forest management involves the detailed enumeration of the forests, after blocking them out into workable units, and placing them under systematic treatment, which will ensure no loss of forest capital, but merely the utilization of the forest increment, which can only be ascertained by very careful investigation, and by knowledge of the silvicultural requirements of each species, whether grown pure or in association, the forest being gradually trained so as eventually to reach its maximum yield and thereafter to maintain it. Here reforestation proper plays the smaller part, the development of the forest depending rather on natural regeneration and the timely removal of the forest growth which chokes and suppresses valuable species in mixed forest. Such work makes no great show, but if it keeps pace with exploitation, it results in a continuous yield from a definite area, instead of mere destructive exploitation, which visits an area only once. The Department has made a tentative

commencement in this direction, and achieved some solid progress in blocking out selected forest areas which are intended to fall under annual exploitation. If any real progress, however, is to be made, additional staff is urgently required, in order that trained officers may be placed in charge of field operations.

A full description of operations in connection with reforestation was given in the last report. The up-country programme is necessarily modified by the decision of the Railway Department, to replace wood fuel with coal, and it will now be necessary to convert the existing fuel plantations into timber areas, and to carry out further experiments with exotic species to ascertain which of these are best adapted to the locality. In the meantime, *Cupressus Lawsoniana* has been introduced very successfully, but is considered to be incapable, alone, of meeting future up-country requirements, which are now met, to a limited extent, from the small remaining supply of indigenous species, on areas awaiting conversion.

The up-country reforestation areas in Uva and the Central Division have now been formed into a Reforestation Division, in charge of a separate officer, and good results are expected therefrom as soon as details regarding staff have been placed on a satisfactory basis, particularly in respect of clerical staff.

In the coppice fellings of the Southern Division (West) jak will not in future be introduced, the protection which this species requires rendering the work expensive and uneconomical. In its place local species, suitable for firewood or timber, will be introduced, jak itself being confined to chena reforestation, in which it is in many instances highly successful.<sup>5</sup> The extent of such areas is now 3,053 acres.

Nedun plantations were extended to 593 acres. Owing to the failure of the south-west monsoon many casualties were experienced in the North-Western Division, but older plants continue to thrive under the system adopted.

The regeneration of dry zone forests:—Forest treatment has been applied in one centre only, in the large exploitation area in Omanagala reserve in the Eastern Division (South), cultural operations being carried out fairly successfully in the first two half-square-mile compartments at a cost of Re. 1·15 per acre for about 600 acres. In the North-Central Division a large block of forest known as the Anaolundawewa proposed reserve was selected, and detailed enumeration, for exploitation in 1928, carried out over 2 square miles. The yield therefrom

of trees of the valuable species of exploitable dimensions was as follows :—

			Cubic feet.
Satin <i>Chloroxylon Swietenia</i>	..	277	12,970
Ebony ( <i>Ebenum</i> )	..	256	—
Palu ( <i>Mimusops hexandra</i> )	..	307	12,028
Ranai ( <i>Alseodaphne Semicarpifolia</i> )	..	86	3,524
Halmilla ( <i>Berrya Ammonilla</i> )	..	205	4,588
Hulanhik ( <i>Chickrassia tabularis</i> )	..	12	583
Milla ( <i>Vitex altissima</i> )	..	46	1,588
Etamba ( <i>Mangifera Zeylanica</i> )	..	12	1,696
Mi ( <i>Bassia longifolia</i> )	..	8	585
Pehimbiya ( <i>Filicium decipiens</i> )	..	1	60

The work will be continued in 1928, with a trained officer in charge, who will take up the detailed enumeration of the area and improvement fellings, on completion of the major felling and carry on the enumeration of the third and fourth blocks and the demarcation of a further 2 square miles, for purpose of exploitation. Extraction from the forest will be to Kanthalam and will feed the new Trincomalee Railway, further concentrations of timber lying at Trincomalee and Habarane awaiting despatch. In the Northern Division, experimental sowing and planting of valuable species was carried out over 80 acres of the Chamalankulam reserve in the Mullaittivu District under the shelter of the existing jungle, which will be cleared back as occasion requires, to make room for the new crop. This work was rendered very difficult by the exceptional weakness of the north-east monsoon.

Attention was turned during the year to the necessity of commencing systematic planting operations in the Northern Division for the purpose of safeguarding the future firewood requirements of Jaffna town, which are rapidly reaching the large outturn of 15,000 tons per annum. Work was entirely experimental, and consisted of direct sowing of five species which can be relied upon to coppice successfully and produce a good fuel. They are *Tamarindus Indica*, Kon (*Schleichera trijuga*), Chadavakku (*Walsura Pisciadia*), Tammana (*Mischodora zeylanicus*), and Vitpani (*Pityranthe verucosa*). The sowing patches were deep holed and filled with leaf mould and humus 10 to 15 seeds being used per patch, at a spacing of 8 ft. by 8 ft.  $1\frac{1}{4}$  acres were treated under full light conditions and a similar extent under partial shade. The area was not fenced. Unusually unfavourable conditions obtained for germination. Out of 882 sowing patches in each area germination took place in 414 under full light conditions with a survival of 260 at the end of the year, and 439 under partial shade, with 323 survivals. Tammana did not germinate at all. It is now necessary to watch results during the first

ar in this very dry region, to compare the advantage of full ht or partial shade conditions, and to observe the damage om forest pests, and the benefit of deep holing, which, it is ared, is in any case too expensive for practice over a large ea. As, however, the existing firewood supply at Kilinochchi nnot last more than another twenty years, it is necessary lose no time in making preparations for fresh supplies. a the same division careful experiments, with satisfactory sults to date, were made with *Casuarina Equisetifolia*, for the ntroduction of which large areas of waste land are available.

Chena reforestation with valuable indigenous species was ontinued in the Eastern Division (South), and experiments ade with cover crops, for the purpose of keeping out illuk rass in young plantations. Work was considered fairly atisfactory, but there is still a difference of opinion as to hether teak should be abandoned in favour of indigenous pecies for this purpose, particularly as early teak thinnings ave been found to sell at a remunerative figure.

Mention may be made of the very successful jak plantations hich are being brought into being in the Kegalla District n conjunction with papaw cultivation. In view of the large profits derived from the latter, the Department can afford to be very exacting in its requirements. One such area, of ore than 200 acres, taken up by European enterprise, revealed, on inspection, a magnificent stand of jak, the tending of which left nothing to be desired. It is hoped shortly to introduce this method of reforestation, on a competitive basis, in one or two of the smaller reserves in the locality.

The aim of the Department has thus, during the period under review, been the greater concentration of work, particularly in respect of exploitation and regeneration, and the marketing of forest produce on more attractive lines and favourable terms, with results which have added considerably to forest revenue. The development of the coupe system, with which it is intended, where possible, to replace sale by individual trees on licences, appears to coincide more or less with the exhaustion of private timber supplies in districts where there is a large demand, and it is expected to become popular rapidly.

## FISHERIES.

*Fresh Fish.*—Except for an almost negligible quantity of imported frozen fish, all fresh fish, consumed in the Colony is obtained by the local Sinhalese and Tamil fishermen fishing from their catamarans and outrigger canoes in the coastal waters. There are, unhappily, no reliable statistics available regarding the quantity of fish caught annually or of the number of boats



and men engaged in the industry, but from inquiries made by the Fisheries Department it would appear that some 15,000 tons of fish valued at Rs. 7,500,000 are carried to Colombo annually by rail from all parts of the Island. A great part of this fish is consumed in Colombo, the remainder is redistributed to up-country districts.

The methods of fishing practised fall, roughly, into three categories :—

- (a) Net fishing from the shore.
- (b) Net fishing from catamarans.
- (c) Line fishing from outrigger canoes.

(a) In this method a large shore seine net is employed, which is operated in much the same way as the Danish seine in European waters. One rope of the net is attached to a shore mooring and the net is laid in a semi-circle of radius about 1 mile from the shore from a flat-bottomed, punt-like boat propelled by oar. After the net is laid the other rope is carried ashore and the net is then pulled in by hand, from 6 to 12 men on each rope. The fishes caught in this net, which is small-meshed, are mostly of the sardine type, big catches of which are often made during their migratory period, namely, from August to April, when they appear in very large shoals.

(b) The second method, net fishing from catamarans, is employed mostly in shallow water round the coast, and more particularly off the north coast of the Island, where catamarans replace the more serviceable outrigger canoe. Catamarans are a species of raft made up of 3 or 4 roughly shaped logs about 25 feet long lashed together by coir yarn and fitted with a short mast carrying a large triangular cotton sail. These boats are the most primitive type of fishing boat used in Ceylon. The nets used from these craft are mostly short lengths of drift net. Fair catches of surface fishes are obtained by the use of these nets, but as the catamaran has a very small carrying power the length of net it is possible to use is necessarily very limited.

(c) The third method, line fishing from outrigger canoes, is that most commonly practised. The outrigger canoe is a dugout canoe made from the trunk of the jak tree. It carries an outrigger or balance, generally on the starboard side, attached to the boat by two ribs, also a large square sail. These boats are capable of developing a speed of 6–7 knots in a favourable wind, and while not able to withstand a heavy sea are moderately seaworthy. In fair weather they venture far out to sea. They fish mostly when running under sail, and catch principally sea (a large mackerel of large size), which is much esteemed, and various fishes of the tunny family.

Despite the fact that the inshore waters round Ceylon and in both surface and bottom feeding fishes, the average daily catches of both catamarans and outrigger canoes are low, due to their inability to carry long lines or nets. Off Colombo the former average only 80 lb. per boat valued at Rs. 13, while the latter average 35 lb. per boat valued at Rs. 16.50.

*Dried Fish.*—The total quantity of fish caught round the coast, although considerable, is totally insufficient to meet the steadily increasing demands for fish goods. No locally caught fish is now available for the preparation of dried and salted fish, and in consequence this industry, which before the advent of rail and motor transport was in a flourishing condition, has now almost completely died out and only survives in the remote districts where transport is unobtainable. As a consequence of the loss of this industry and of the demand for fish goods, the value of the imports of dried fish goods to the Island have shown a surprising increase during the last few years. In 1920 their value was Rs. 4,508,568, in 1921 it rose to Rs. 7,058,148, and in 1926 it stood at Rs. 8,769,698. That is, the value of these imports has doubled itself within six years. The actual quantity imported in 1920 was 331,646 cwt. and in 1926 421,991 cwt., so that while the cost has risen 100 per cent. the weight has increased by only about 25 per cent.

*Trawling.*—An unsatisfactory feature of the fishing industry in Ceylon is, that corresponding with the increase in exports, there is a decrease in the number of the fishing community, brought about by a not unnatural desire of the younger of these men to forsake a calling which is somewhat hazardous and badly paid for more lucrative and congenial employment. It is clear, therefore, that steps must be taken to improve the prospects of the local fishing industry to make it more attractive to the fisher community if the industry is to be of benefit to the Colony.

The obvious step towards such an improvement is the introduction of improved fishing methods. This has been the aim of the Fisheries Department since its inception in 1920. This Department, under the direction of the Government Marine Biologist, who is also Director of the Colombo Museum, has devoted considerable attention to this subject, and after making a complete trawling survey of the coastal waters, during which two valuable trawl fishing banks were found, is now engaged in a fishing and hydrographical survey of these banks for the purpose of chart making to aid their commercial exploitation.

The two banks in question are the Wadge bank off Cap Comorin and the Pedro bank off the north-east corner of the Island. The former has an area of over 4,000 square miles and the latter of 1,000 square miles. Numerous experimental trawls have been taken from these banks which have demonstrated their suitability to steam trawling. These trawls have been taken by the Government Fisheries vessels "Lilla" and "Nautilus," both North Sea trawlers of the Castle type. The latter, which has now replaced the former, is fitted with a direct expansion ammonia refrigerating plant and a cold storage chamber of about 4 tons capacity. Several tons of fish trawled from both banks have been frozen on board the "Nautilus" and have been put on to the Colombo market where they have commanded a ready sale at a wholesale rate of 30 cents per lb. ( $5\frac{1}{2}d.$ ).

A trawling company formed in 1926 to work these two banks will commence trawling operations, with in the first instance, one trawler, on the arrival of this vessel which is now under construction in England. The effect of this vessel's activities on the local market will be almost negligible, as it would require 40 trawlers working at full pressure during the year to catch the equivalent of imported dried and salted fish only. The Fisheries Department have also under consideration a scheme for investigating the waters other than those suitable for trawling, using a small vessel of the fishing smack type to replace the outrigger canoe. These investigations are with a view to the introduction of long lining and drift net fishing for surface water fishes generally and particularly seer and tunny fishes. The imports of Maldivian fish into the Island during 1926 were valued at Rs. 5,038,176. This cured product, which is imported largely from Southern India, is prepared from tunny fishes which abound in these waters from August-April. Small auxiliary vessels of the smack type should do much to place the local fishing industry on a more satisfactory footing which would result in more adequate supplies to meet the existing demand for fish goods.

*Pearl Fishery.*—No fishery has been held since 1925. Thirty million oysters which were present on Donnan's Muthuvarattu Paar in 1926, and which were expected to yield a fishery in 1927, became so reduced in numbers by November, 1926, that preparations for a fishery were abandoned, and it is unlikely that sufficient oysters will remain to provide a fishery in 1928.

*Window-pane Oyster Fishery.*—The window-pane oyster, which is fished for its pearls, commonly occurs in the mud of the shallow almost landlocked bay at Trincomalee known as Lake Tamblegam. Government control the waters of this

like, and when fishable oysters are present it is the custom to lease the fishing rights for a period of three years to the highest bidder.

The present lessee, who took over the lease in 1925 at Rs. 7,000 or the first year and Rs. 9,000 for the second and third years, sold fisheries in 1926 and 1927. According to his returns he fished approximately two million oysters in 1926 and obtained 472·26 rupees' weight of pearls. In 1927 he fished approximately one million oysters and obtained 263·72 rupees' weight of pearls. His lease terminates at the end of the year.

The fishery is carried on from small dugout canoes by local Moormen from the neighbouring villages of Kinniyai and Tamblegam. These men, who work in shallow water of not more than 2 fathoms, are not skilled divers, such as the Arab divers of the Persian Gulf or the Tamil divers of South India, who fish the pearl oyster of the Persian Gulf and the Gulf of Mannar from a depth of 2 to 10 fathoms. They remain under water a short time only, have no stone sinker, and carry no net. When working in shallow water of 5 feet and under, they feel about in the mud with their feet and pick up shells with their toes. In deeper water they make short dives to the bottom, bringing up 2 or 3 shells each dive. These they hold in one hand until they have collected about one dozen oysters, when they return to their boat, deposit the oysters, and after a short rest resume diving. At the end of the day's fishing, usually midday, all the boats return to the shore with their catch, which they deposit in the lessee's private enclosure, retaining one-third of the oysters in lieu of pay as in the Gulf of Mannar fisheries. The oysters are stacked on shore and are opened by women, who pick out the pearls. It is not the custom to rot these oysters and search the washings for pearls, as is the practice at Marichchukaddi with the Ceylon pearl oyster.

The pearls obtained from this oyster although much more numerous than those which are obtained from the Gulf of Mannar pearl oyster are of an irregular shape, brittle, and of an inferior lustre; consequently they have no European market, but are readily purchased in India and in Ceylon, where they are used for the manufacture of cheap jewellery. In some parts of India they are ground into powder and used medicinally.

*Chank Fisheries.*—Chank fisheries in Ceylon waters are confined to the shallow water area north of Adam's Bridge known as the Palk Strait, where chanks occur in great abundance, principally off the Jaffna islands. These mollusc shells have considerable value in India, where they are cut and carved

into bangles. 3,270,409 shells were exported from the Island during the year, and a revenue of Rs. 163,511 collected as export duty was obtained.

Chanks also occur in some quantity in the inshore waters of the pearl banks area, where fishing is prohibited. The question of opening this area to chank fishing is now receiving the attention of Government.

*Publications.*—The following publication was issued during the year :—

Ceylon Administration Report for 1926, Marine Biology.

The following are ready for publication :—

- (1) Surface Currents of the Gulf of Mannar, based on Drift Bottle Experiments.
- (2) Salinities and Temperatures of the Gulf of Mannar.
- (3) Cured Marine Products of Ceylon.

### SALT.

The manufacture, collection, and sale of Ceylon salt constitute a Government monopoly, which is protected by the imposition of a duty of Rs. 3 per cwt. on imported salt. The Controller of Revenue has general supervision over the administration of the excise of salt revenue throughout Ceylon.

The amount realized by the sale of Ceylon salt issued from Government depôts during 1927 was approximately Rs. 1,106,034·10. To this figure should be added the sum of Rs. 821,233·47 credited to revenue under Head 1, Customs, as duty on salt imported into Ceylon. The total revenue derived by Government from salt in 1927 was, therefore, Rs. 1,927,267·57. as against Rs. 1,817,066·61 in 1925 and Rs. 1,997,123·83 in 1926.

The manufacture of salt at Chiviyateru in the Jaffna District, which had been discontinued since 1923, was resumed experimentally in 1926 under the supervision of an Assistant Salt Superintendent, trained under the Salt Adviser, whose services have been lent to the Government Agent, Northern Province. The salt produced showed a decided improvement in quality as compared with the salt obtained previously to 1923.

Adverse weather conditions and shortage of labour are the main factors which operate against the successful collection of salt. Collections of naturally formed salt took place at the Karanavai lewayas and Marichchukaddi Odai in the Northern Province and at Hambantota in the Southern Province; salt was manufactured at the Government salterns at Elephant Pass

and Palavi, and at the privately owned salt pans at Nilaveli, Thiviyateru, and Puttalam. Although the harvest in 1927 was more satisfactory than that of 1926, the quantity collected was below the normal standard capacity of production of the various salterns and salt pans in the Island. The total yield during 1927 was approximately 513,366 cwt., as against 414,697 cwt. in 1925 and 319,230 cwt. in 1926. The distribution of the harvest was as follows :—

			Cwt.
Hambantota	..	..	151,218
Puttalam (excluding Palavi)	..	..	31,750
Jaffna (excluding Elephant Pass)	..	..	43,924
Mannar	..	..	4,293
Trincomalee	..	..	57,847
Elephant Pass	..	..	188,984
Palavi	..	..	35,350

The total output for the year represents a little under five-sixths of the quantity annually consumed in the Island, which is estimated at about 620,000 cwt.

It has not been found possible during the past two years to build up the desired reserve of local salt and to bring about a return to normal prices and methods of distribution. Traders continue to import salt from India on their own account to supplement the local supply. No loss of revenue is involved as the salt imported is subject to an import duty of Rs. 3 per cwt.

The measures which were adopted in July, 1925, to supplement Ceylon salt by the importation of Indian salt and to prevent Ceylon salt from underselling imported salt have been continued. The issues of Ceylon salt were confined mainly, as in the previous year, to the areas in the neighbourhood of the salterns and salt pans, and to outlying districts where high transport charges would have rendered the price of Indian salt prohibitive.

At the beginning of 1927 the total stocks of salt in the various Government depôts amounted to 636,826 cwt. At the end of the year the stocks stood at 802,760 cwt. The question of a return to normal distribution of Ceylon salt will depend on the results of the 1928 harvest.

The experiments at Elephant Pass on the treatment of bitterns for the recovery of by-products were continued on a larger scale during the year, but the abnormal weather prevented much progress being made.

The permanent bund at Palavi to enclose the primary condensing area was completed in January. The construction at Nilaveli in the Trincomalee District of storage platforms to accommodate 115,000 cwt. of salt was continued under the supervision of the Salt Adviser. They will replace the previously existing temporary salt stores.

## MINERALOGICAL DEPARTMENT.

The field work of the Department has been confined to the examination of certain areas in connection with water supply problems of only local interest.

The question of opening the extensive deposits of ilmenite sand on the east coast of the Island for exploitation has been under consideration during the year under review.

## EXCISE.

With the closure of the year 1927 the Department completed the sixteenth year of its existence.

## ARRACK.

The distillation of arrack is carried on at eight large distilleries under close Excise supervision. Seven of these were constructed by private enterprise. The eighth, the Government Distillery, had been leased out to a private contractor, whose lease was terminated at the end of 1927.

The production of arrack during the year was 680,936 proof gallons. The figure is considerably higher than 1926, due to the fact that 1927 was particularly dry and was therefore a good distilling year.

## DISTRIBUTION AND STORAGE.

The Excise Department has built up, since the present system of contract supply was introduced first in the Northern Province in 1920 and throughout the Island in 1924, a large organization to control the storage and distribution of arrack. It was considered advisable to allow the raw arrack produced in the new distilleries to mature in bond for at least one year before it is issued for consumption. At the end of 1927 there were 16 warehouses in the Island and the stock of arrack carried was 617,767 gallons.

This close Government control of the supply of arrack has proved a success, though it has been criticised on two grounds: (i.) that Government should not engage in the liquor trade, and (ii.) that private enterprise should be encouraged. The answer to these criticisms is that Governments all over the world have found it increasingly necessary to assume control of the liquor trade, and that it is generally regarded that state management or disinterested management is the best method of promoting temperance.

*Consumption.*—The arrack consumption in 1927 was 752,031 gallons, which shows a decrease of 94,054 gallons on the 1926 figure. The number of arrack taverns in 1925–26 was 272, and

1926-27 was 255. The arrack revenue for the two financial years was Rs. 8,932,025 and Rs. 8,539,136, which is equivalent to Re. 1.99 and Re. 1.90, respectively, per head of population. The arrack consumption per head of population was .19 gallon in 1925-26 and .17 in 1926-27. The arrack revenue per gallon was Rs. 10.59 in 1925-26 and Rs. 10.84 in 1926-27.

### FERMENTED TODDY.

Fermented toddy can be drawn only on licence and sold only in a tavern. In practice licences are issued only on the application of the tavern renters, distillers, and in a few cases of vinegar manufacturers. In Jaffna and Matara Districts and in the North-Central Province there are no taverns, distilleries, or vinegar licences. In those districts no fermented toddy can be legally drawn.

*Consumption.*—In the “wet” districts where toddy taverns still exist the licit consumption was 4,501,608 gallons in 1927, as against 4,264,516 gallons in 1926.

The toddy consumption per head of population in 1925-26 was .98 gallon and in 1926-27 .99 gallon. The toddy revenue was Rs. 2,434,841 and Rs. 2,626,119, and the revenue per head 60 cents and 58 cents, respectively. The revenue per gallon of toddy consumed was 49 and 59 cents, respectively.

### SWEET TODDY.

The number of trees licensed for sweet toddy is coconut 38,835, palmyra 2,152, and kitul 44,159. The Districts of Galle, Matara, Jaffna, the Pasdun korale east in Kalutara, and various villages in Kegalla, Ratnapura, and Badulla Districts are exempted from the necessity of taking out sweet toddy licences. This exemption has added to the opportunities of a growing illicit sale of fermented toddy in these districts without apparently helping the jaggery industry, which was the original object of the exemption. Except in certain parts of the Jaffna District, there is practically no jaggery industry worthy of the name.

### FOREIGN LIQUOR.

The licensing revenue from foreign liquor during the financial year 1926-27 was Rs. 146,709.75. The imports of foreign liquor in 1927 were as follows:—224,093 gallons malt liquor, 61,205 gallons wines, and 343,270 gallons spirits. The total quantity of beer outturned by the Nuwara Eliya Brewery in 1927 was 164,447 gallons.



The revenue derived from foreign liquor, including Customs duty and licence fees is, as follows :—

	Rs.	c.
Total foreign liquor revenue ..	5,039,586	0
Revenue per head ..	1	12
Revenue per gallon ..	5	90

### EXCISE REVENUE AND EXPENDITURE.

The total revenue for the financial year 1926-27 was Rs. 11,340,051, made up as follows :—

	Rs.
Arrack (nett revenue) ..	8,543,136
Toddy ..	2,626,119
Foreign liquor licences ..	146,709
Composition fees ..	24,087
	<hr/>
	11,340,051

To this should be added Police Court Fines Rs. 290,394 and Foreign Liquor Imports (Customs Revenue) Rs. 4,892,877, making a grand total of Rs. 16,523,322 of revenue directly connected with excisable articles. The expenditure on the Excise Department, including salaries of Civil Servants, all Excise Department Officers, and all other charges which were not incurred under the Contract Supply System, amounts approximately to Rs. 907,450, i.e., between 5 and 6 per cent. of the revenue including Customs Duties and about 8 per cent. of the revenue excluding Customs Duties. If Police Court Fines are deducted, the expenditure is still under 10 per cent. of the revenue. It cannot be said that the Department is expensive or has failed to justify its existence. It is a matter for congratulation that with such an inadequate staff it has accomplished so much.

### LOCAL OPTION.

The following taverns will be closed from October 1, 1928, as the result of local option polls :—Arrack 73, Toddy 72, Foreign Liquor Taverns 15, Hotel Bar 6, and Beer and Porter 1. Total 167.

### INTOXICATING DRUGS.

Ganja and opium are smuggled in from India by sailing vessels and catamarans by a well organized syndicate which has ramifications all over the Island for transport and retail. The Customs, Police, and Excise have all been successful in making large seizures. The traffic is increasing notwithstanding this.

## EXCISE OFFENCES.

The total detections for 1927 amount to 7,289, as against 7,046 in 1926. Of the 128 Inspectors sanctioned, 24 are engaged in distillery and warehouse work, so that these 7,200 and odd detections are the work of, roughly, 100 men. This averages 72 cases per month per Inspector, and is highly creditable to the Department.

## ASSAULTS ON EXCISE OFFICERS.

Cases of obstruction and assault are becoming increasingly frequent. There were 49 cases in 1927, as against 30 in 1926 and 16 in 1925. The question of arming all Excise Inspectors needs consideration in view of the growing disregard of Excise officers for law and order in Hanwella, Panadure, Kalutara, Galle, and Jaffna Districts.

The drink bill of Ceylon for 1927 is estimated to be as follows:—

		Total. Rs.		Per Head. Rs. c.
Arrack	..	11,230,330	..	2 50
Toddy	..	4,198,023	..	0 93
Malt liquor	..	1,160,669	..	0 26
Wines	..	1,065,186	..	0 24
Spirits	..	10,487,158	..	2 33
Total	..	28,141,366		6 26

The revenue per rupee spent by the consumer on arrack is 76 cents, on toddy 62 cents, and on foreign liquor is 39 cents.

## IV.—Trade and Economics.

## GENERAL REVIEW.

THE total trade of the Colony, excluding postal articles, ships' stores, and specie, in the year 1927 amounted to Rs. 854,399,419. This figure is smaller by Rs 44,107,311 than the figure for 1926, but is larger than that for any other year in the history of the Colony. The total imports amounted to Rs. 406,663,779, an increase of Rs. 11,419,538 over the figure for 1926. The total exports amounted to Rs. 447,735,640. This figure is Rs. 55,526,849 less than that for 1926, and Rs. 44,753,656 less than that for 1925. Thus the imports of

the Colony have shown an increase and the exports a decrease, but exports still exceed the total imports, the difference being Rs. 41,071,861.

The strike in the harbour during the month of February affected both imports and exports seriously, and consequently the month of February was the worst month with regard to both imports and exports and the month of March the best. There was a lull again in April and May, and a progressive improvement in both imports and exports up to October, with a slight fall in exports during the last three months of the year. The trade on the whole has been steady and while there was no "boom," it may be considered that generally the position was satisfactory.

Notes on the principal imports and exports will be found below. As in the last few years, there has been a general expansion under most heads of imports, showing again that prosperity is general. As regards exports, trade continued in a very flourishing condition. Tea and the coconut industries had a satisfactory year, but the rubber industry showed a considerable fall, the total value of rubber exports being Rs. 119,175,344, as against Rs. 170,120,022 in the previous year. Cacao showed some improvements. Plumbago improved as regards quantity, but prices ruled low, and the actual value of the exports was less than in the previous year.

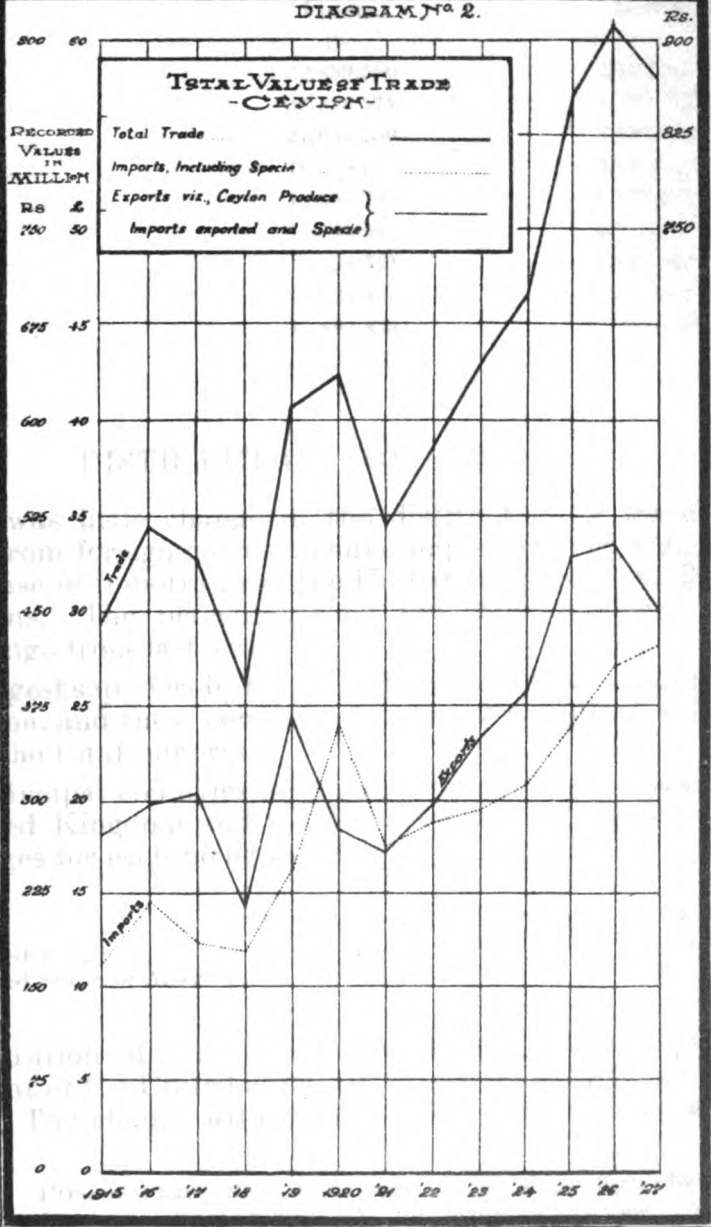
The following table shows the annual value of imports and exports for a period of ten years, excluding the value of postal articles, ships' stores, and specie :—

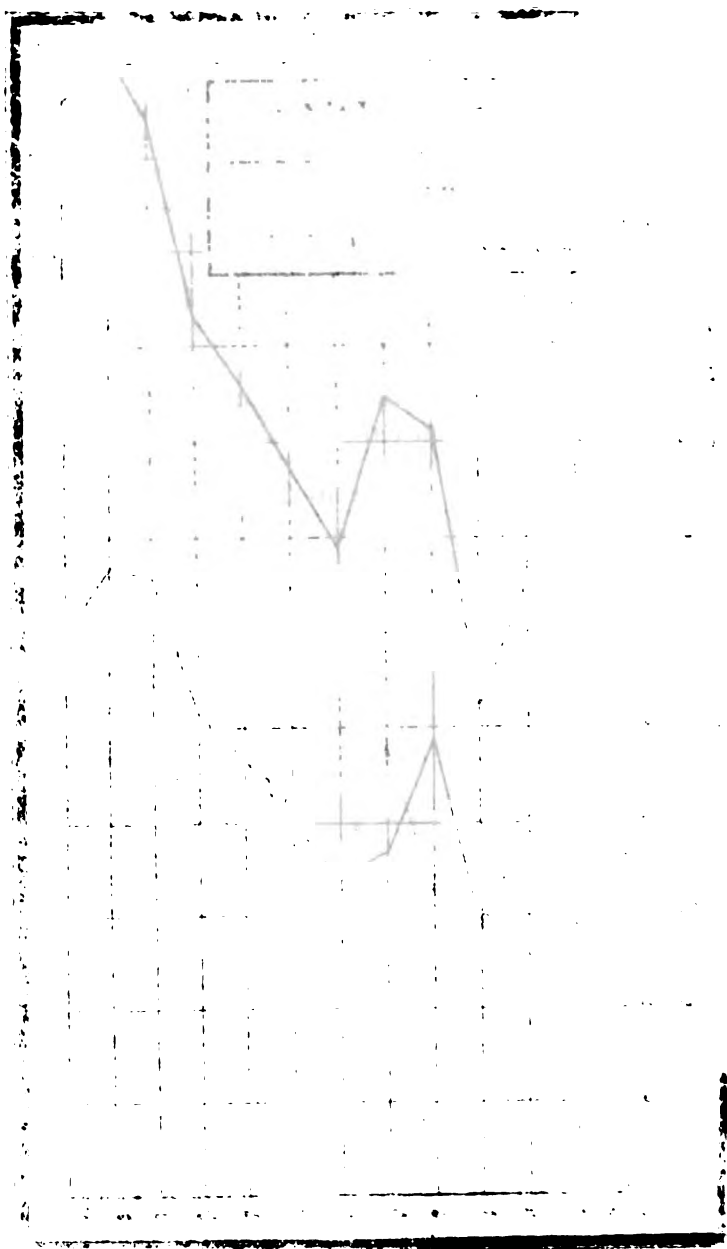
Year.	Imports. Rs.	Exports. Rs.	Total. Rs.
1918	.. 177,716,763	.. 211,325,334	.. 389,042,097
1919	.. 239,323,731	.. 367,054,779	.. 606,378,570
1920	.. 321,275,652	.. 268,462,183	.. 589,737,835
1921	.. 260,897,161	.. 256,600,413	.. 517,497,574
1922	.. 280,414,704	.. 297,753,215	.. 578,167,919
1923	.. 287,947,472	.. 351,035,248	.. 638,982,720
1924	.. 302,734,490	.. 385,354,418	.. 688,088,908
1925	.. 351,328,702	.. 492,489,296	.. 843,817,998
1926	.. 395,244,241	.. 503,262,489	.. 898,506,730
1927	.. 406,663,779	.. 447,735,640	.. 854,399,419

The total values of Ceylon trade for the last eight years, excluding specie, postal articles, and ships' stores, but including coal and liquid fuel supplied to steamships, are as follows :—

Year.	Lakhs of Rupees.	Year.	Lakhs of Rupees.
1920	.. 6,291	1924	.. 7,119½
1921	.. 5,481½	1925	.. 8,670
1922	.. 5,982	1926	.. 9,216½
1923	.. 6,601	1927	.. 8,798½

DIAGRAM No 2.





The values of coal and liquid fuel supplied to steamships in 1919 are as follows :—

Year.	Value of Coal supplied to Vessels.		Value of Liquid Fuel supplied to Vessels.	
	Rs.		Rs.	
1919 .. ..	32,899,550	..	2,869,327	
1920 .. ..	36,638,574	..	2,733,738	
1921 .. ..	27,638,759	..	3,030,034	
1922 .. ..	16,309,907	..	3,720,575	
1923 .. ..	13,551,793	..	7,576,801	
1924 .. ..	15,088,683	..	8,773,710	
1925 .. ..	14,138,321	..	9,032,855	
1926 .. ..	12,824,935	..	10,341,890	
1927 .. ..	13,809,874	..	11,605,425	

### DISTRIBUTION OF TRADE.

There was little change in the distribution of trade, but exports from foreign countries have improved very slightly at the expense of imports from the United Kingdom and British Possessions. The percentages for the chief countries show little change from last year.

The largest suppliers by far are British India, United Kingdom, and Burma, and these countries between them supplied 65 per cent. of the total imports.

The principal countries as regards exports have again been the United Kingdom and the United States of America, the percentages for each being as follows :—

	1926.	1927.
United Kingdom .. ..	42·58	42·96
United States of America .. ..	27·5	23·04

The position of the United Kingdom has thus improved, whilst that of the United States of America has shown a further decline. The change with regard to the countries have been slight.

British Possessions (mainly India, including Burma) has shown an increase in total trade of 2·75 per cent., whilst Foreign Countries have shown a drop of 2·11 per cent. The total trade with the United Kingdom has shown a small fall (0·59 per cent.).

Comparative percentages for the last three years of the value of imports, exports, and total trade are as follows. The figures are exclusive of imported rubber, and of coal, liquid fuel, and other ships' stores :—

<i>Imports.</i>	1925. Per Cent.	1926. Per Cent.	1927. Per Cent.
From the United Kingdom ..	23·23	22·77	22·58
From the British Possessions ..	55·23	51·39	51·05
From the Foreign Countries ..	21·54	25·84	26·37
<i>Exports.</i>			
To the United Kingdom ..	38·29	41·4	41·77
To the British Possessions ..	15·08	14·03	16·84
To the Foreign Countries ..	46·63	44·57	41·39
<i>Total Trade.</i>			
From and to United Kingdom ..	32·18	33·36	32·77
From and to British Possessions ..	31·37	30·14	32·89
From and to Foreign Countries ..	36·45	36·5	34·34

The principal countries from which Ceylon's imports are obtained, with the percentage of the total value supplied by each for the last three years, are shown in the following table :—

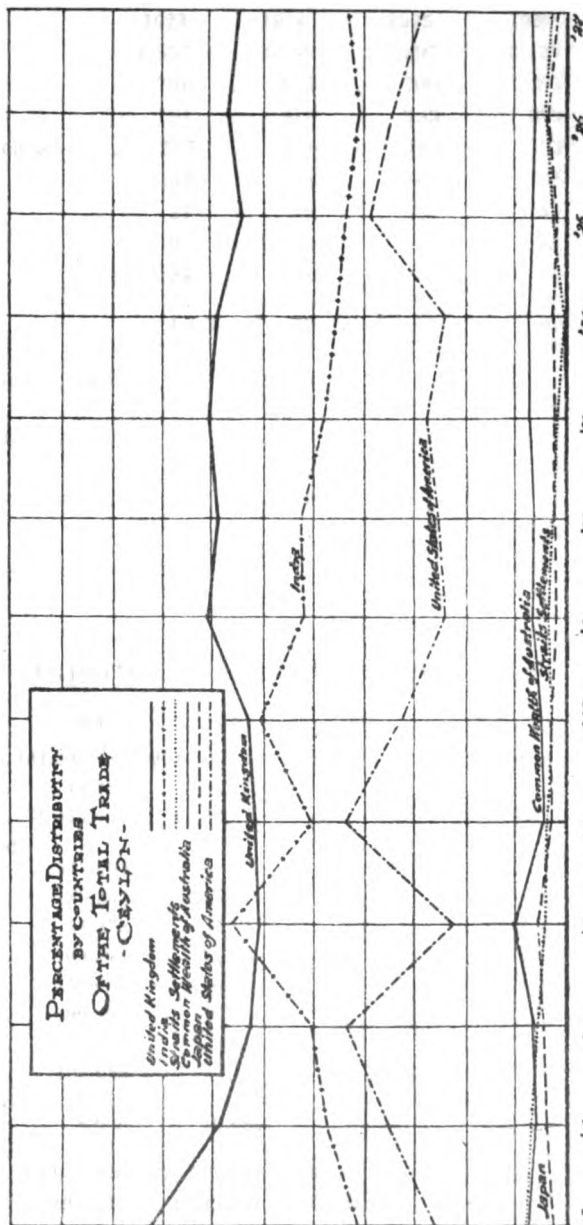
Country.	1925. Per Cent.	1926. Per Cent.	1927. Per Cent.
1. British India ..	24·84	23·95	23·08
2. United Kingdom ..	22·21	21·99	21·97
3. Burma ..	23·57	19·82	20
4. Java ..	3·15	3·39	3·55
5. United States of America ..	2·53	3·24	3·48
6. Straits Settlements ..	2·09	2·78	3·34
7. Sumatra ..	1·71	2·43	2·93
8. Borneo (excluding British) ..	2·05	1·29	2·92
9. Japan ..	2·03	2·47	2·28
10. Germany ..	1·62	2·62	2·19
11. Australia ..	2·1	2·02	1·94
12. British South Africa* ..	2·19	1·85	1·81
13. Holland ..	1·36	1·52	1·6
14. France ..	·75	1·16	1·23
15. Maldives ..	1·3	1·26	1·2
16. Persia ..	·95	2·25	1·06
17. Belgium ..	·84	1·03	1·02
18. Italy ..	·78	1·05	·88
19. Siam ..	·29	·37	·38
20. Hong Kong ..	·34	·29	·36
21. Sweden ..	·26	·27	·3
22. Canada ..	·52	·59	·29
23. Switzerland ..	·24	·33	·28
24. China (excluding Hong Kong) ..	·17	·23	·27
25. Finland ..	—†	·13	·21
26. Egypt ..	·11	·17	·21
27. Chile ..	·07	·17	·18
28. Czecho Slovakia ..	—†	·22	·16
29. Austria ..	·07	·11	·15
30. Morocco ..	—	—	·1

\* Cape Colony, Natal, and other British Possessions in Africa.

† No heading.

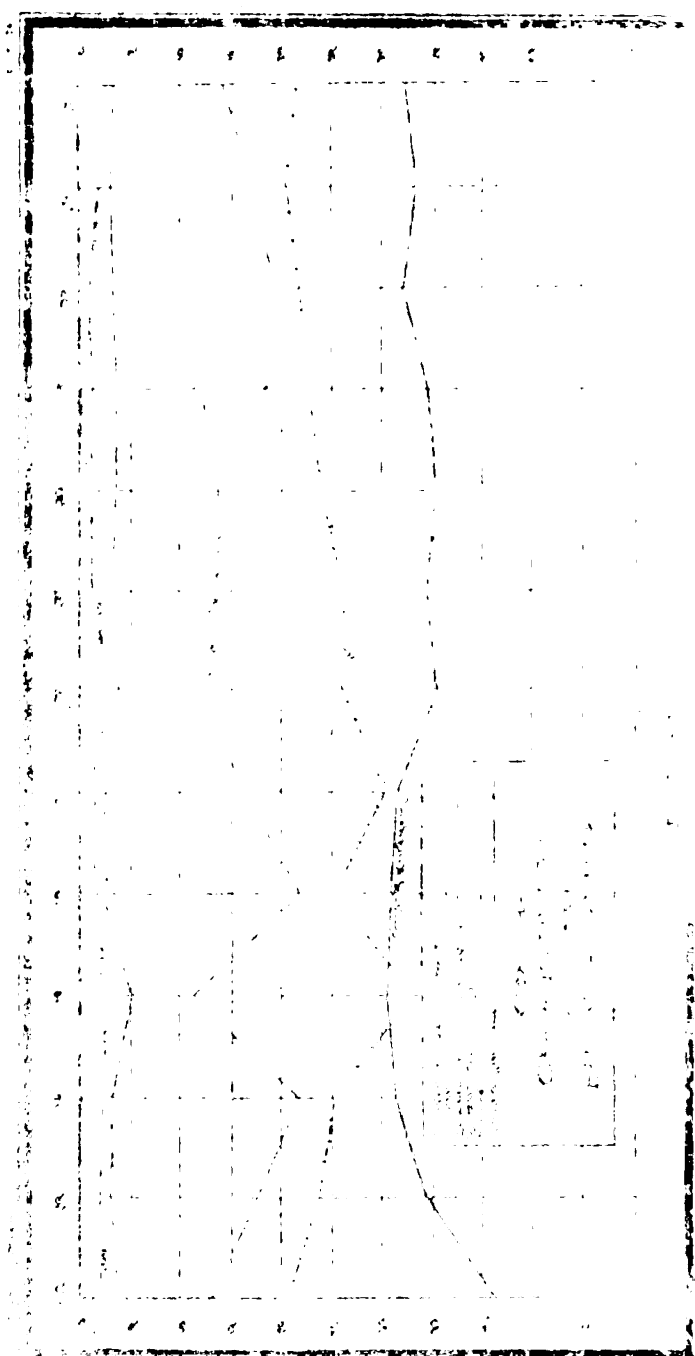
PER CENT.

DIAGRAM No. 3



Statistical Department





The values of the staple products exported from Ceylon during the last five years are as follows :—

		Lakhs of Rupees.				
		1923.	1924.	1925.	1926.	1927.
1.	Tea ..	1,857	2,150	1,997	2,132	2,137
2.	Rubber	736	637	1,700	1,701	1,191
3.	Copra ..	181	310	383	398	318
4.	Coconut desiccated	227	220	188	173	204
5.	Coconut oil	139	158	168	155	165
6.	Cinnamon	21	29	32	42	47
7.	Arecanuts	35	33	40	42	30
8.	Coir fibre	24	29	19	21	28
9.	Cacao ..	22	25	23	20	27
10.	Plumbago	15	13	30	26	25
11.	Coir yarn	20	21	21	18	21
12.	Skins, dressed and undressed	7	6	7	13	16
13.	Coconuts, fresh	13	25	19	14	15
14.	Citronella oil	21	29	23	18	12
15.	Coconut poonac	6	9	11	9	8
16.	Cardamoms	6	7	11	8	8
17.	Papain..	—	—	—	—	6

The quantities exported during the same years are—

		1923.	1924.	1925.	1926.	1927.
1	Tea (lb.)	181,939,731*	204,930,307*	209,791,384*	217,183,666*	227,037,856*
2	Rubber (cwt.)	748,359..	740,722..	912,370..	1,177,147..	1,116,630
3	Copra (cwt.)	1,015,465..	1,769,189..	2,273,717..	2,419,398..	1,982,154
4	Coconut, desiccated (cwt.)	818,793..	871,341..	794,161..	754,367..	872,833
5	Coconut oil (cwt.)	480,543..	552,633..	616,917..	570,463..	673,153
6	Cinnamon (cwt.)	44,578..	47,484*	42,360*	43,115*	42,415*
7	Arecanuts (cwt.)	160,578..	130,904..	154,291..	165,475..	118,278
8	Coir fibre (cwt.)	359,082*	480,492*	460,245*	457,234*	535,849*
9	Cacao (cwt.)	60,904..	69,351..	68,788..	64,751..	80,797
10	Plumbago (cwt.)	213,383..	193,017..	308,523..	232,453..	257,686
11	Coir yarn (cwt.)	105,088..	117,199..	131,387..	107,885..	130,821
12	Skins, dressed and undressed (cwt.)	8,605..	10,685..	11,443..	13,637..	17,177
13	Coconuts, fresh (No.)	15,963,670..	29,121,041..	23,288,786..	16,951,368..	18,875,750
14	Citronella oil (lb.)	1,121,271..	1,433,381..	1,415,639..	1,431,351..	1,358,191
15	Coconut poonac (cwt.)	116,549..	156,251..	168,839..	160,277..	173,155
16	Cardamoms (cwt.)	2,788*	2,667*	3,302*	2,848*	3,177*
17	Papain (lb.)	—	—	—	—	83,416

\* Including ships' stores.

The principal countries buying Ceylon produce and manufactures are given in the following table, with the percentage of value taken by each :—

Country.	1925.		1926.		1927.	
	Per Cent.		Per Cent.		Per Cent.	
1. United Kingdom ..	39·54	..	42·58	..	42·96	
2. United States of America ..	29·86	..	27·3	..	23·04	
3. Australia ..	4·04	..	4·15	..	5·13	
4. Germany ..	4·06	..	4·96	..	4·91	
5. Italy ..	2·71	..	2·65	..	2·52	
6. British South Africa ..	—*	..	1·59	..	2·05	
7. British India ..	2·18	..	1·48	..	2·05	
8. New Zealand ..	1·5	..	1·79	..	1·93	
9. Egypt† ..	2·06	..	1·41	..	1·66	
10. Canada ..	1·48	..	1·34	..	1·51	
11. Denmark ..	2·43	..	1·6	..	1·43	
12. Norway ..	1·46	..	1·29	..	1·37	
13. Holland ..	1	..	1·25	..	1·15	
14. France ..	·81	..	·85	..	·83	
15. Belgium ..	·73	..	·83	..	·82	
16. China (excluding Hong Kong) ..	·3	..	·39	..	·8	
17. Iraq ..	—†	..	·73	..	·64	
18. Russia in Europe ..	·27	..	·14	..	·64	
19. Argentine Republic ..	—†	..	·33	..	·45	
20. Straits Settlements ..	·34	..	·35	..	·44	
21. Japan ..	·27	..	·33	..	·39	
22. Spain (excluding Gibraltar). ..	·23	..	·27	..	·36	
23. Sweden ..	·27	..	·34	..	·33	
24. Other Foreign Countries in Africa§ ..	·09	..	·11	..	·3	
25. Phillipine Islands ..	·19	..	·17	..	·21	
26. Russia in Asia ..	·03	..	·01	..	·16	
27. Greece ..	·01	..	·07	..	·15	
28. Roumania ..	·08	..	·05	..	·14	
29. Portuguese East Africa ..		..	·07	..	·14	
30. Newfoundland ..	·14	..	·15	..	·14	
31. Hong Kong ..	·06	..	·07	..	·12	
32. Mexico ..	—*	..	·05	..	·11	
33. Anglo-Egyptian Soudan ..	—¶	..	·24	..	·11	
34. Mauritius ..	·07	..	·08	..	·10	
35. Fiume ..	—*	..	·06	..	·10	

\* New heading from 1926.

† Figure for 1925 includes Anglo-Egyptian Soudan.

‡ Not shown separately.

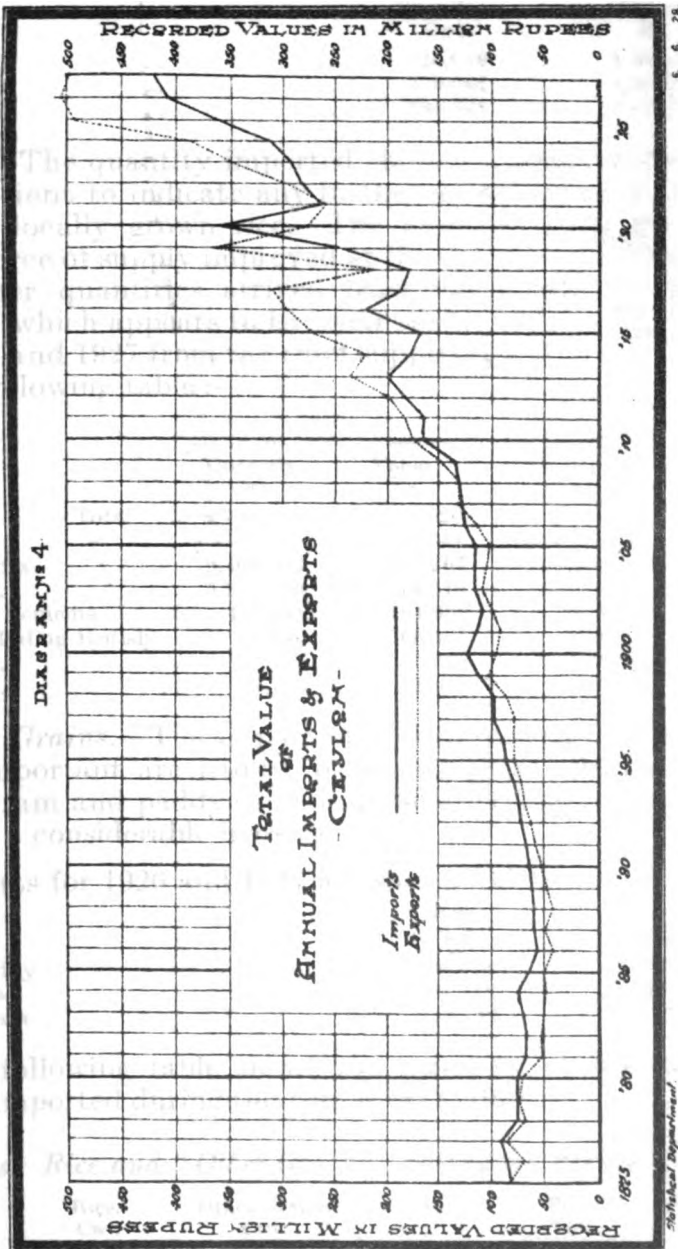
§ Figure for 1925 includes Portuguese East Africa.

|| Included under other foreign countries.

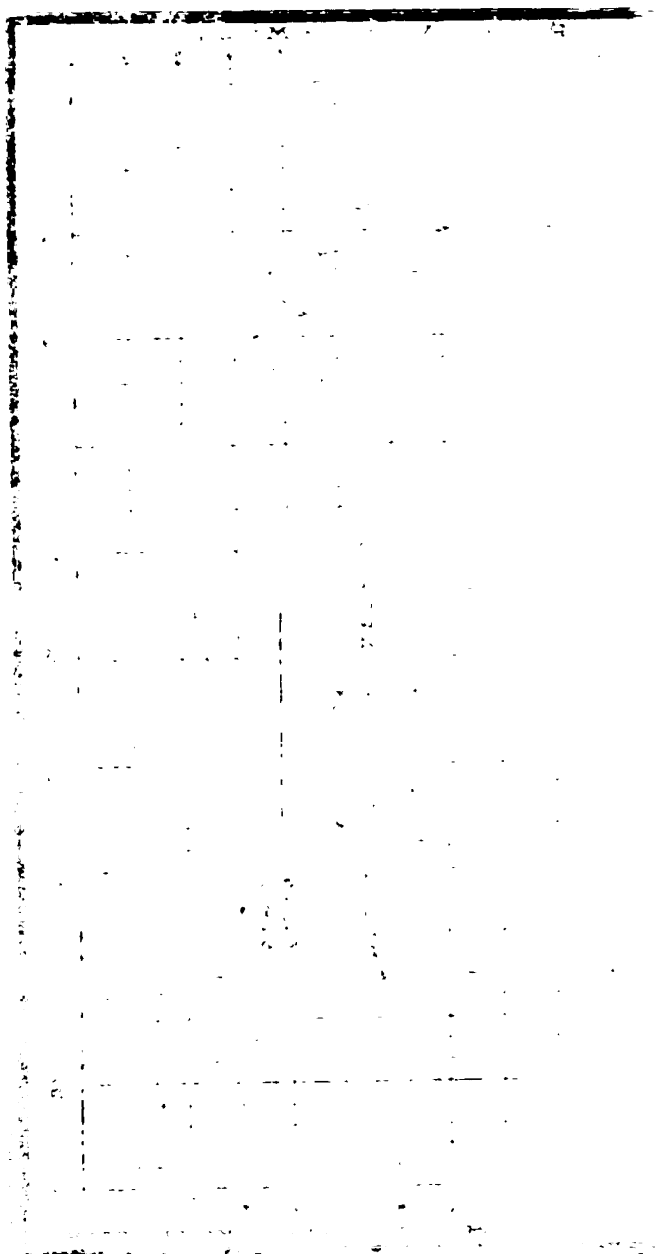
¶ Included under Egypt.

## NOTES ON THE PRINCIPAL IMPORTS.

*Wheat Products, Flour and Meal.*—The whole supply came from Australia and British India, the former being the main supplier. In 1927 313,265 cwt. came from Australia and 76,627 cwt. from British India. In 1926 the figures were 278,904 cwt. and 79,703 cwt.



Statistical Department



The following table shows quantities and value imported in 1925, 1926, and 1927 :—

			Quantity. Cwt.		Value. Rs.
1925	..	..	320,088	..	4,801,335
1926	..	..	359,062	..	4,307,895
1927	..	..	389,892	..	4,678,723

*Rice.*—The quantity imported showed a slight increase, but not sufficient to indicate any further substitution of imported rice for locally grown rice. The position of Burma as the chief source of supply improved at the expense of British India, but larger quantities arrived from the Straits Settlements, much of which appears to be originated in Siam. The imports for 1926 and 1927 from the chief supplying countries are shown in the following table :—

		1926.			1927.	
		Quantity. Cwt.	Value. Rs.		Quantity. Cwt.	Value. Rs.
Total	..	8,794,947	98,061,620		9,087,264	102,851,651
British India	..	2,406,552	22,895,267	..	1,899,281	18,992,810
Burma	..	5,922,919	70,211,510	..	6,379,440	76,020,598
Straits Settlements	..	412,418	4,164,999	..	783,254	7,588,805
India (excluding British)	..	50,840	766,491	..	7,951	67,796
Siam	..	25	240	..	14,984	157,500
Other	..	2,193	23,113	..	2,354	24,142

*Other Grains.*—The import of “other grains,” of which the most important are paddy, peas, and gram, showed a slight fall. Gram and paddy came in in smaller quantities, but peas showed a considerable increase.

Imports for 1926 and 1927 are shown below :—

			1926. Cwt.		1927. Cwt.
Paddy	..	..	650,964	..	481,642
Peas	..	..	267,148	..	351,412
Gram	..	..	130,032	..	111,660

The following table shows the quantity of rice and other grains imported during the period 1918–1927 :—

*Imports : Rice and “Other Grains” during the Period 1918–1927.*

Year.	Rice. Cwt.	Other Grains. Cwt.	Year.	Rice. Cwt.	Other Grains. Cwt.
1918	.. 6,472,152	.. 815,161	1923*	.. 7,423,833	.. 1,134,443
1919	.. 5,342,575	.. 1,433,295	1924*	.. 7,519,186	.. 965,469
1920	.. 5,788,730	.. 1,310,996	1925*	.. 8,321,381	.. 1,014,297
1921	.. 5,859,957	.. 1,324,895	1926*	.. 8,794,947	.. 1,125,130
1922*	.. 7,209,157	.. 956,550	1927*	.. 9,087,264	.. 1,013,840

\* Includes imports by Government.

*Feeding Stuffs for Animals.*—The most important feeding stuff for animals imported is gingelly poonac, of which 383,843 cwt. were imported, all except 877 cwt. from the Straits Settlements coming from British India.

*Sugar.*—The imports of sugar again showed a large increase. Java being by far the largest source of supply. The total value of sugar imported is now nearly Rs. 15,000,000. Refined sugar other than in lumps and loaves, which is the principal form in which sugar is imported, increased from 951,119 cwt. in 1926 and 793,463 cwt. in 1925 to 1,057,046 cwt. in 1927, of which 921,804 cwt. came from Java.

*Manufactured Tobacco, Cigars, and Cigarettes.*—There has been an increase under all heads except cigars, and the consumption of tobacco, particularly cigarettes, is obviously increasing among all classes. Practically all the cigarettes imported, except a few pounds from Egypt, came from the United Kingdom, and the same applies to manufactured tobacco. Of 7,106 lb. of cigars imported, 2,940 lb. came from the Phillipines, 1,597 lb. from Holland, and 1,234 lb. from British India. The importation of beedies from British India has shown a progressive increase, the figures for the years 1925, 1926, and 1927 being 43,726 lb., 58,467 lb., and 75,687 lb., respectively.

The quantities of each cleared for home consumption during the past eight years are as follows :—

Year.	Cigars.	Cigarettes.	Manufactured Tobacco.	Total.
	lb.	lb.	lb.	lb.
1920 ..	12,198 ..	371,575 ..	29,034 ..	412,807
1921 ..	8,092 ..	319,005 ..	23,330 ..	350,427
1922 ..	8,883 ..	330,071 ..	21,429 ..	360,383
1923 ..	7,387 ..	327,482 ..	21,354 ..	356,223
1924 ..	7,272 ..	403,370 ..	20,379 ..	431,021
1925 ..	7,075 ..	447,998 ..	19,364 ..	474,437
1926 ..	7,474 ..	511,011 ..	21,082 ..	539,567
1927 ..	7,106 ..	568,109 ..	26,078 ..	601,293

*Spirits.*—Very considerable increases have again been shown under the heads of brandy and gin, but whisky has shown a slight decrease. Brandy comes almost entirely from France, gin mainly from Holland, but 15,675 gallons of good quality gin came from the United Kingdom. The whisky came from the United Kingdom. The values of all three classes kept up, showing that there was no general decrease in quality.

The quantities cleared for home consumption during the years 1925, 1926, and 1927 are shown in the following table :—

*Quantities of Spirits cleared for Home Consumption.*

		Proof Gallons.		
		1925.	1926.	1927.
Total	..	224,558	307,746	333,072
Brandy	..	59,815	96,448	122,905
Gin	..	104,537	140,192	151,987
Whisky..	..	60,206	71,106	58,180

*Cotton, Manufactured and Raw.*—The total value of imports for 1927 under this head is Rs. 29,277,969, a decrease of Rs. 1,470,772 below the figure for 1926. The decrease is general and effects all markets and appears to have been due to overbuying in previous years. The following table shows the distribution :—

		1926. Rs.	1927. Rs.
Total	..	30,748,741	29,277,969
United Kingdom	..	15,282,001	14,583,873
British Empire	..	9,099,844	8,400,736
Foreign Countries	..	6,366,896	6,293,360

*Raw Cotton.*—The bulk of the raw cotton imported, 23,670 lb. valued at Rs. 1,094,121, came, as usual, from British India, but this year the United States of America entered the market with 3,201 lb. valued at Rs. 126,797. The quantity imported in 1926 was 18,501 lb. valued at Rs. 984,704.

*Cotton Waste.*—Of 4,096 lb. valued at Rs. 111,164, 1,668 lb. came from the United Kingdom and 2,421 lb. from British India.

*Bleached Yarn and Twist.*—16,470 lb. valued at Rs. 13,870 were imported, of which 15,871 lb. came from British India. This was a considerable decrease in the figures for 1926, when 31,648 lb. valued at Rs. 26,168 was imported.

*Dyed Yarn and Twist.*—80,086 lb. valued at Rs. 57,611 were imported, mainly from British India. In the previous year 77,447 lb. valued at Rs. 66,053 were imported.

*Piece Goods.*—The import of cotton piece goods is very large in 1927. The total imports amounted to 62,800,468 yards valued at Rs. 25,908,998—an increase of 1,883,897 yards or 3 per cent. over the figures for 1926, which were 60,916,571 yards valued at Rs. 26,943,473. There was thus a fall in value of about Rs. 1,000,000. Bleached piece goods, which showed a considerable fall in 1926, or below the high figure for 1925, rose



again in 1927 to 16,086,358 yards valued at Rs. 6,020,176, which is still nearly 1,000,000 yards behind the quantity imported in 1925. Dyed piece goods, which showed the biggest increase in 1926, when the figure of 28,950,433 yards valued at Rs. 13,891,530 was reached, fell to 26,640,275 yards valued at Rs. 11,851,559. This figure is still over 3,000 yards in excess of the figure for 1925. Printed piece goods showed a large increase from 11,815,844 yards valued at Rs. 5,218,301 in 1926 to Rs. 15,600,061 valued at Rs. 6,374,092 in 1927.

As regards country of origin, the United Kingdom more than kept her lead. In bleached piece goods the decrease shown in 1926 gave place to a large increase in 1927, the figure being 11,178,952 yards in 1926 and 14,274,744 yards in 1927. British India still led in dyed piece goods with 14,777,223 yards, as against 15,714,375 yards in 1926. Holland showed a considerable increase under this head, from 4,659,226 yards in 1926 to 6,228,594 yards in 1927.

*Lace and Net* showed a considerable increase in quantity but a decrease in value. In 1926 2,338,426 yards valued at Rs. 207,748 were imported. The figures for 1927 were 2,869,004 yards valued at Rs. 176,829. The United Kingdom was the chief supplier with 1,755,889 yards, but France increased from 126,426 yards in 1926 to 568,866 yards in 1927. Switzerland sent 348,100 yards.

*Embroidery* came mainly from Switzerland, which, however, showed a drop from 3,250,446 yards in 1926 to 1,895,217 yards in 1927. The total import was 2,204,933 yards valued at Rs. 199,083 in 1927 and 4,075,134 yards valued at Rs. 375,925 in 1926.

*Thread*, as usual, came mostly from the United Kingdom, which supplies five-sixths of the import. 222,456 lb. valued at Rs. 821,871 were imported.

*Coal*.—The import of coal showed an increase from 663,385 tons valued at Rs. 16,324,703 in 1926 to 742,387 tons valued at Rs. 18,954,938 in 1927. British India resumed the first place with 337,400 tons, as against 224,137 tons imported in 1926. British South Africa receded to the second place with 260,831 tons, the import in 1926 from this country being 326,929 tons. The imports from the United Kingdom showed an increase from 76,397 tons in 1926 to 113,710 tons in 1927.

*Liquid fuel* has shown a progressive increase for a number of years and reached this year the figure of Rs. 54,154,070 gallons. This is more than twice the quantity imported in 1922. The largest source of supply this year was Dutch Borneo, which replaced Persia, the leading supplier last year. Borneo supplied

26,182,633 gallons against 13,851,581 gallons in 1926. Persia supplied 21,092,310 gallons against 34,485,388 gallons in 1926. The United States of America came into the field with 5,251,166 gallons. The total imports for 1926 and 1927 were—

Year.			Gallons.		Value. Rs.
1926	..	..	48,336,969	..	11,955,424
1927	..	..	54,154,070	..	14,209,092

44,636,500 gallons of liquid fuel were exported as ships' stores.

*Kerosine Oil.*—The total imports of bulk oil increased from 6,708,153 gallons in 1926 to 8,539,307 in 1927, and further considerable changes occurred in the source of supply. Sumatra was the leading supplier with 4,074,526 gallons against 1,711,357 in 1926. Dutch Borneo took the second place with 2,679,629 gallons against 592,906 gallons in 1926. The United States of America, which held the first place in 1926 with 3,168,094 gallons, fell to the third place in 1927 with 1,785,152 gallons. Case oil imports fell from 172,688 gallons to 58,302, the United States of America taking the first place.

Total imports of bulk and case kerosine oil were—

				Gallons.
1926	..	..	..	6,880,841
1927	..	..	..	8,597,609

*Petrol.*—This article showed an increase to 6,946,194 gallons in 1927 from 6,308,256 gallons in 1926. The increase is not so large as in 1926, but the total quantity is very considerable and indicates how far the mechanization of transport has gone in Ceylon. The whole supply except 757,068 gallons from Dutch Borneo came from Sumatra.

The imports for the last seven years have been—

Year.		Gallons.	Year.		Gallons.
1921	..	1,381,671	1925	..	4,085,370*
1922	..	1,389,363*	1926	..	6,308,256*
1923	..	1,959,474*	1927	..	6,946,194
1924	..	3,749,236*			

\* Includes imports by Government.

*Manures.*—The total quantity of manure imported showed an increase in quantity and value, which may be taken as an indication of the satisfactory condition generally of the main crops throughout the greater part of the year. There were not many large changes on the main sources of supply, but a large increase in the supply of fish guano from South Africa and of sulphate of ammonia from British India may be noted. The

chief kinds of manures and countries from which they were mainly derived are shown in the following table :—

Kind.	Cwt.	Value. Rs.
Groundnut poonac (British India) ..	658,182	3,638,432
Bone meal (British India) ..	336,474	1,716,971
Sulphate of ammonia (United Kingdom) ..	257,048	2,012,519
Fish guano (British South Africa and British India) ..	206,388	1,528,224
Muriate of potash (Germany) ..	148,572	831,573
Nitrate of soda (Chile and United Kingdom) ..	125,850	1,024,566
Superphosphate (Belgium) ..	117,719	542,741
Fish manure (British India) ..	114,791	692,632
Refuse of saltpetre (British India) ..	96,539	969,769
Blood meal (United States of America and United Kingdom) ..	78,176	932,974
Basig slag (Belgium) ..	64,967	151,510
Nitrolim (Czecho Slovakia and Italy) ..	53,736	354,510
Castor seed (United Kingdom) ..	47,237	179,102

The total imports during the last three years are as follows :—

Year.	Quantity. Cwt.	Value. Rs.
1925 ..	2,088,526	12,744,286
1926 ..	2,579,085	15,993,939
1927 ..	2,744,197	16,437,307

*Tea and Other Chests.*—The number of chests imported in 1927 showed a slight increase over the figure for 1926. The chief supplier was Japan with 2,511,115 chests, a decrease of 239,932 below the figure for 1926. The United Kingdom sent 887,458, an improvement on the 1926 figure of 688,668. The only other supplier of importance is Finland, with 462,150 chests in 1927 and 280,893 in 1926. The imports for the last three years are as follows :—

Year.	No.	Value. Rs.
1925 ..	3,138,944	4,209,147
1926 ..	3,811,539	5,896,219
1927 ..	3,930,987	4,668,596

*Horses.*—213 horses were imported in 1927, as against 162 in 1926, 197 in 1925, and 111 in 1924. Of these, 100 came from the United Kingdom, 75 from British India, 35 from British South Africa, and 3 from Australia.

*Cattle, Buffaloes, Goats, and Sheep* for food came mostly from British India. The following table gives the number and value of these animals imported in 1926 and 1927 :—

	1926.		1927.	
	No.	Value. Rs.	No.	Value. Rs.
Cattle ..	7,428	222,840	7,931	243,930
Buffaloes ..	2,364	70,920	2,426	72,780
Sheep ..	15,516	155,160	18,160	181,600
Goats ..	95,435	954,350	99,661	996,610

*Motor Cars and Lorries.*—Slightly fewer cars were imported in 1927 than in 1926. The United States of America again headed the list as regards number of cars and the United Kingdom as regards value. Both countries show an increase in number, the United States of America with 845 cars valued at Rs. 1,963,893 as against 812 cars valued at Rs. 2,222,435 in 1926, and the United Kingdom with 775 cars valued at Rs. 2,090,646 as against 724 cars valued at Rs. 2,136,961 in 1926. Canadian-made cars fell from 630 in 1926 to 440 in 1927, French increased from 173 to 207, and Italian decreased from 206 to 184.

The United States of America increased its lead as regards lorries, the figures being 467 in 1926 and 495 in 1927. The United Kingdom sent 110 lorries in 1927 and 97 in 1926. Canada decreased from 343 lorries in 1926 to 132 in 1927.

The following table shows the imports for 1926 and 1927 :—

Year.		Number.		Value. Rs.
<b>Motor Cars—</b>				
1926 ..	..	2,570	..	6,471,196
1927 ..	..	2,481	..	6,021,954
<b>Lorries—</b>				
1926 ..	..	948	..	2,597,550
1927 ..	..	761	..	1,916,770
<b>Chassis for cars—</b>				
1926 ..	..	1	..	2,539
1927 ..	..	1	..	3,615

*Cement.*—The quantity of cement imported increased by 18·8 per cent. over the already large figure for 1926, indicating great building activity and an increased use of this material for building. The two largest suppliers were, as usual, the United Kingdom with 793,213 cwt. and Germany with 407,823 cwt. The imports for the last five years are as follows :—

Year.		Quantity. Cwt.		Value. Rs.
1923 ..	..	521,337	..	1,232,304
1924 ..	..	714,814	..	1,547,184
1925 ..	..	950,093	..	1,968,786
1926 ..	..	1,148,850	..	2,321,835
1927 ..	..	1,364,018	..	2,799,035

*Metal and Metalware, Ferrous.*—The imports of ferrous metals showed an increase of 8·9 per cent. in quantity and 7 per cent. in value above the figure for 1926. The United Kingdom continued to be by far the main supplier with imports to the value of Rs. 10,880,374 or 70·3 per cent. of the total, an increase of 9·1 per cent. on the figure for the previous year. Belgium took the second place with imports to the value of Rs. 1,632,903, i.e., 10·5 per cent. of the total, an increase of 6·4 per cent. on the figure for 1926. Germany receded to the third place with imports to the value of Rs. 1,448,593, a drop of 22·3 per cent. below the figures for 1926. The total imports during the last five years are as follows :—

Year.		Quantity. Cwt.		Value. Rs.
1923 ..	..	624,104	..	9,087,050
1924 ..	..	839,483	..	11,876,465
1925 ..	..	932,860	..	11,845,579
1926 ..	..	1,285,060	..	14,452,910
1927 ..	..	1,399,714	..	15,467,704

*Non-Ferrous Metal and Manufactures thereof.*—The total imports amounted to Rs. 5,761,948. The United Kingdom was the chief supplier with Rs. 2,677,572, a slightly smaller figure than last year, but she took 47 per cent. of the trade as compared with 42 per cent. last year. Burma supplied only about half the quantity she supplied in 1926, the amount being Rs. 1,189,475. The imports from British India increased by 15 per cent. to Rs. 1,138,992. The total imports for 1926 and 1927 are as follows :—

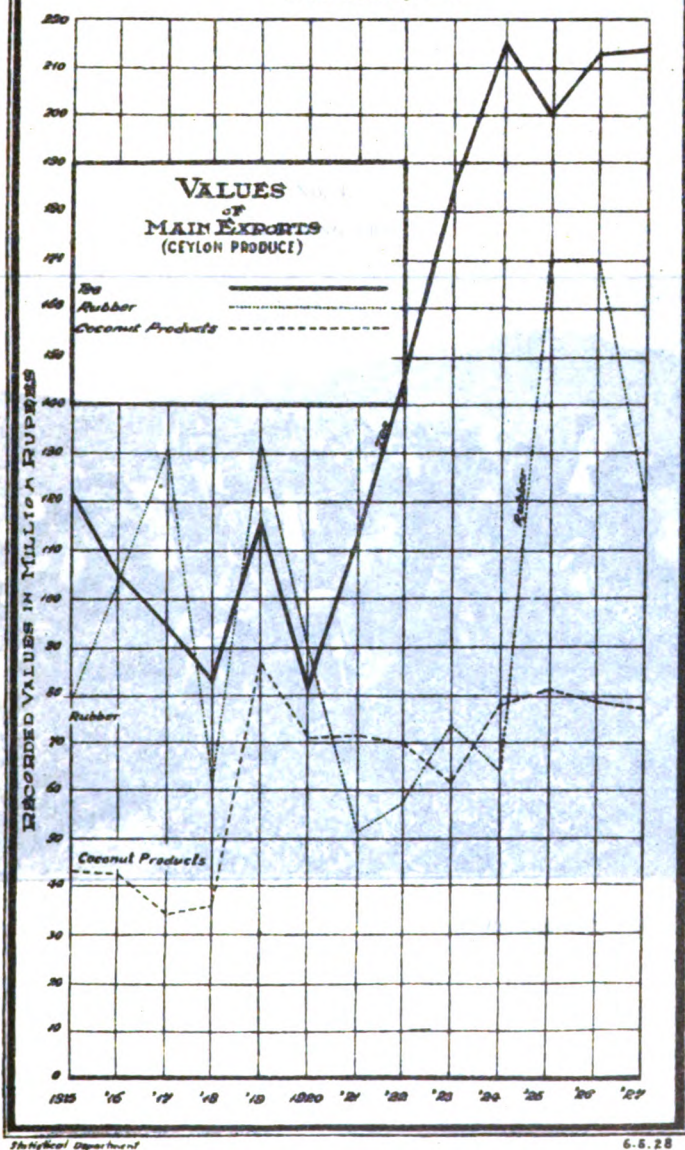
Year.		Quantity. Cwt.		Value. Rs.
1926 ..	..	179,936	..	6,932,869
1927 ..	..	146,849	..	5,761,948

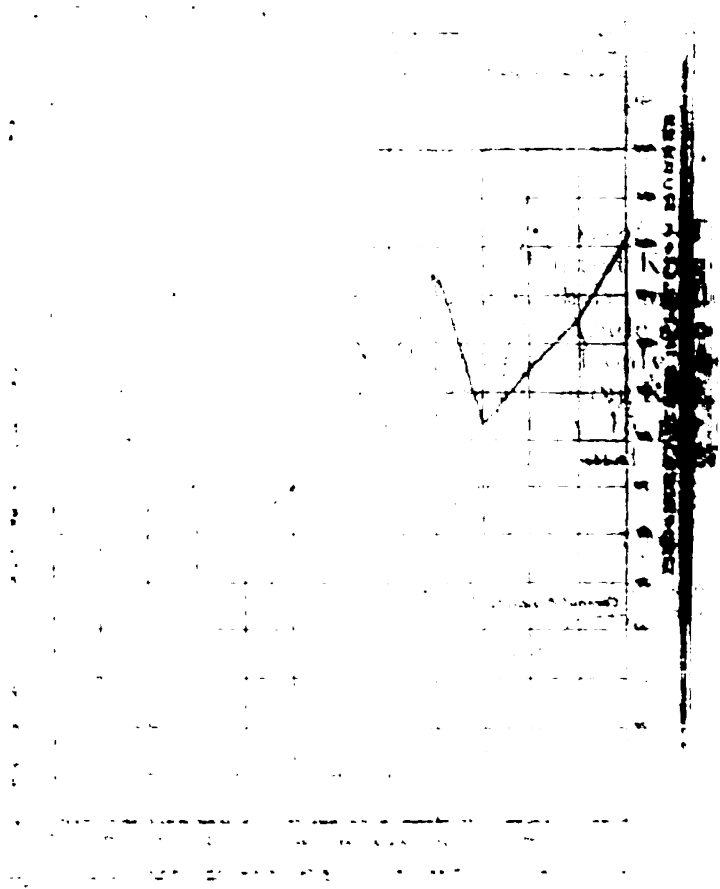
## NOTES ON THE PRINCIPAL EXPORTS.

*Tea.*—The following table shows the quantities of tea exported each year for the last eight years in millions of pounds :—

Year.		Million Pounds.	Year.		Million Pounds.
1920	..	184	1924	..	205
1921	..	161	1925	..	210
1922	..	172	1926	..	217
1923	..	182	1927	..	227

DIAGRAM N° 5





No. 4.  
PLUCKING TEA.



*Plâté, Limited, Colombo.*



No. 5.

**TAPPING RUBBER.**



*Pláté, Limited, Colombo.*

The export of tea thus forms a new record for the Island. The actual exports were 227,037,856 lb.\* valued at Rs. 213,774,632. The average price was thus 94½ cents per lb. The averages in previous years were Re. 1·05 in 1924, 95 cents in 1925, and 98 cents in 1926.

The following table shows the exports in 1926 and 1927 to the United Kingdom, British Possessions, Foreign Countries, and as ships' stores :—

	1927. lb.	1926. lb.	Increase. lb.	Decrease. lb.
United Kingdom ..	144,905,844 ..	141,681,033 ..	3,224,811 ..	—
British Possessions ..	53,798,064 ..	51,158,205 ..	2,639,859 ..	—
Foreign Countries ..	28,246,151 ..	24,243,410 ..	4,002,741 ..	—
Ships' Stores ..	87,797 ..	101,018 ..	— ..	13,221
	<hr/> 227,037,856	<hr/> 217,183,666	<hr/> 9,867,411	<hr/> 13,221
		Deduct decrease ..	13,221	
		Nett increase ..	<hr/> 9,854,190	

There was little change in the distribution of the tea exported. The United Kingdom continued to take about two-thirds of the total. Australia, the second largest consumer, increased her imports of Ceylon tea from 16,088,648 lb. (7½ per cent.) to 18,062,969 lb., thus taking nearly 8 per cent. of the whole. The United States of America decreased from 15,390,854 lb. (7 per cent.) to 13,782,638 lb. (6 per cent.). New Zealand with 4 per cent. declined from 8,611,762 lb. to 8,437,874 lb. British South Africa took 7,975,795 lb., and Canada and Egypt each took over 5,000,000 lb.

*Rubber.*—The exports of rubber were again regulated by the Rubber Restriction Scheme, which remained in force throughout the year. The authorized export at the beginning of the year was 80 per cent. of the standard production. From February to April inclusive the figure was 70 per cent. This was reduced to 60 per cent. on May 1, and remained at this figure for the rest of the year. There was naturally a fall in the total export, 125,062,578 lb. valued at Rs. 119,174,347 being exported as against 131,840,505 lb. valued at Rs. 170,078,219. The average price per lb. was 95 cents. In 1925 it was Re. 1·66, and in 1926 Re. 1·29. The United States of America remained the principal purchaser with 78,985,455 lb. valued at Rs. 76,163,302. In 1926 they took 81,625,410 lb. valued at Rs. 107,985,455. The United Kingdom took 34,580,864 lb. valued at Rs. 32,279,131, a considerable fall on the figures for 1926, which were 40,806,644 lb. valued at Rs. 50,582,613. Germany imported 4,833,190 lb., Australia took 3,612,350 lb., and France 1,360,745 lb.

\* Including ships' stores.

*Coconut Products.*—The exports of the three chief coconut products during the last six years have been—

Year.		Desiccated Coconut. Cwt.		Copra. Cwt.		Coconut Oil. Cwt.
1922	..	768,215	..	1,686,589	..	554,626
1923	..	818,793	..	1,015,465	..	480,543
1924	..	871,341	..	1,769,189	..	552,633
1925	..	794,161	..	2,273,717	..	616,917
1926	..	754,367	..	2,419,398	..	570,463
1927	..	872,833	..	1,982,154	..	673,153

The values of these products for 1926 and 1927 were—

Year.		Desiccated Coconuts. Rs.		Copra. Rs.		Coconut Oil. Rs.
1926	..	17,275,984	..	39,848,479	..	15,489,320
1927	..	20,481,761	..	31,844,823	..	16,567,551

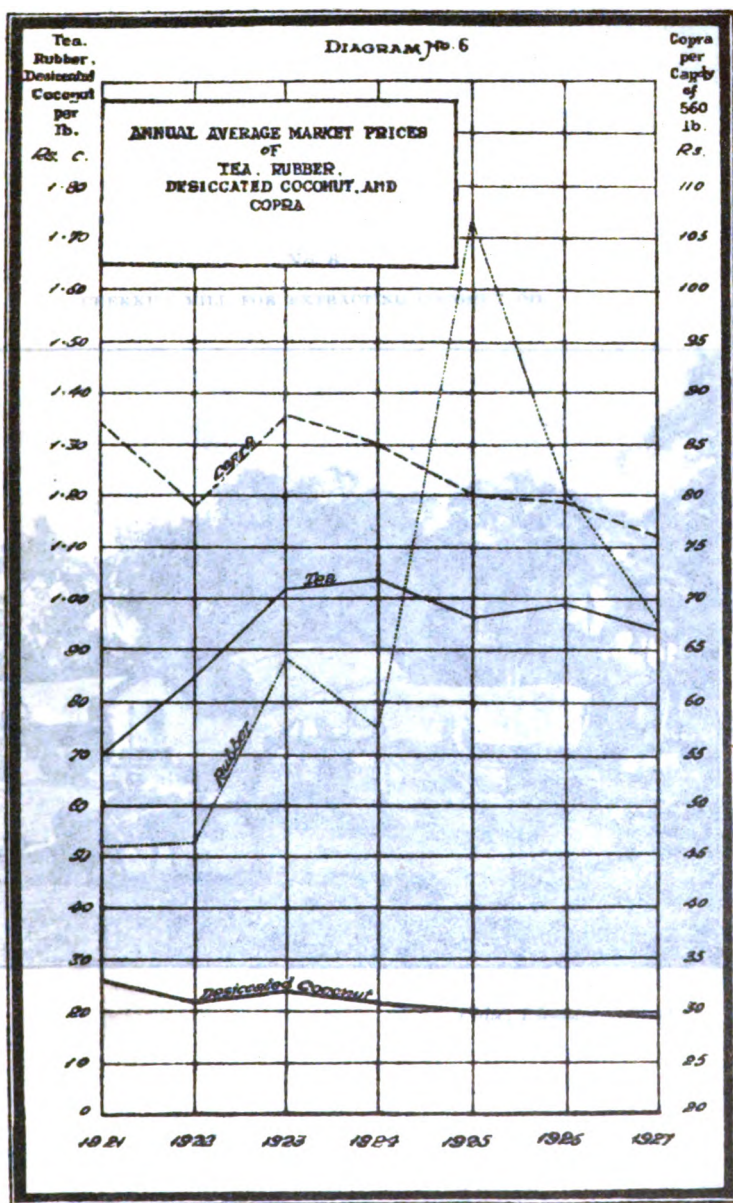
The total quantity exported in 1927 was therefore 3,528,540 cwt. valued at Rs. 68,894,135.

*Desiccated Coconut.*—has shown a considerable increase. The average price was Rs. 23.47 per cwt. The largest buyers were as usual the United Kingdom with 290,118 cwt., the United States of America with 206,116 cwt., and Germany with 136,481 cwt. All these showed an improvement on the figures for 1926.

*Copra* did not maintain the improvement of the last two years. Germany retained her position she gained in 1926 as the chief purchaser with 565,660 cwt., which was however a fall of 222,900 cwt. compared with the figure for 1926. Italy took 483,559 cwt. showing a similar reduction on the figure for 1926. Norway took 328,024 cwt., Denmark 229,912 cwt., and Holland 171,625 cwt. The exports to the United Kingdom fell from 74,047 cwt. in 1926 to 21,575 cwt. in 1927. The average price in 1927 was Rs. 16.06 per cwt. In 1926 the average price was Rs. 16.47 per cwt., and in 1925 Rs. 16.83 per cwt.

*Coconut Oil* showed a considerable improvement, the total export being 673,163 cwt. valued at Rs. 16,567,773. The distribution was, as usual, very wide, the chief purchaser being the United Kingdom with 176,479 cwt. valued at Rs. 4,307,872. British India took the second place this year with 85,761 cwt. Denmark took 79,912 cwt., a big drop from 149,490 cwt., with which she headed the list last year. Italy took 66,300 cwt. Egypt 60,760 cwt., and Sweden 42,748 cwt. The average price was Rs. 24.63 per cwt.

*Fresh Coconuts.*—The number exported showed an increase. mainly in the increase to the United Kingdom, which took 7,840,346 nuts against 5,733,798 nuts in 1926. Egypt fell from 6½ millions to 4¾ millions, Germany increased from 2½ millions to



Statistical Department.

6. 6. 28.



No. 6.

CHEKKU : MILL FOR EXTRACTING COCONUT OIL.



*Pldté, Limited, Colombo.*



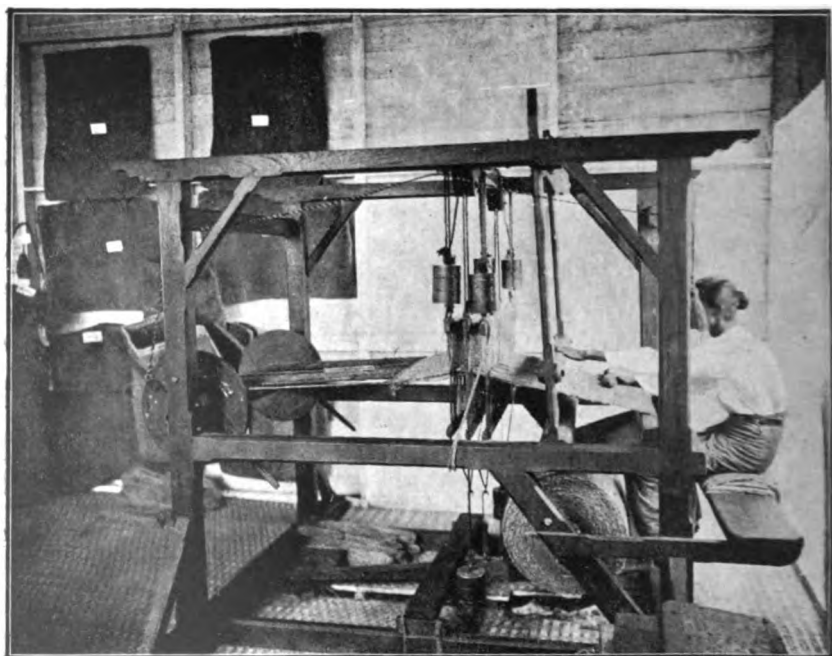






No. 7.

WEAVING COIR MATTING.



*Plâté, Limited, Colombo.*

3½ millions, and Holland rose from just over a million to nearly 1½ millions. The total exports for 1926 and 1927 are as follows :—

Year.		Number.		Value. Rs.
1926	..	16,951,368	..	1,393,682
1927	..	18,875,750	..	1,515,087

#### OTHER COCONUT PRODUCTS.

*Coir Yarn.*—Exports decreased from 107,885 cwt. valued at Rs. 1,831,138 in 1926 to 105,754 cwt. valued at Rs. 1,766,723 in 1927. The United Kingdom took 43,563 cwt. and Germany 29,116 cwt. The average price was Rs. 16·74 per cwt.

*Coir Rope.*—21,123 cwt. were exported, of which 20,812 cwt. went to the Straits Settlements.

*Bristle Fibre.*—170,728 cwt. valued at Rs. 1,569,904 were exported, the average price thus being Rs. 8·26 per cwt. Japan with 79,637 cwt. and Belgium with 41,337 cwt. were the chief buyers, each showing a considerable increase.

*Mattress Fibre.*—365,121 cwt. valued at Rs. 1,313,404 were exported in 1927. In 1926 303,102 cwt. valued at Rs. 927,823 were exported. The average price in 1927 was Rs. 3·58 per cwt. The chief purchasers were the United Kingdom with 106,752 cwt. British South Africa with 64,200 cwt., Germany with 47,891 cwt., Belgium with 37,871 cwt., and Australia with 37,155 cwt.

*Coconut Poonac.*—173,155 cwt. valued at Rs. 1,241,983 were exported, of which 91,131 cwt. went to Germany and 79,577 cwt. went to Belgium.

*Plumbago.*—The quantity of plumbago exported rose from 232,453 cwt. in 1926 to 257,686 cwt. in 1927. The total value of the exports, however, fell from Rs. 2,616,994 in 1926 to Rs. 2,525,700 in 1927. The average price was thus Rs. 9·80 per cwt. in 1927 and Rs. 11·26 per cwt. in 1926. The United States of America was the best market with 95,840 cwt., a slight increase over the quantity taken in 1926, 90,081 cwt., but still well below that taken in 1925, 117,364 cwt. Germany took 61,946 cwt. in 1927, 35,086 cwt. in 1926, and 86,796 cwt. in 1925. The United Kingdom's imports in 1927 amounted to 26,370 cwt., which was less than half the quantity imported in 1926, 58,395 cwt.

#### FACTORIES.

There was an increase of 23 in the total number of factories as compared with 1926, or just over 1·4 per cent. The actual number of new factories registered during the year was 79, and 56 ceased work permanently. New factories included 9 tea, 6 rubber, 9 desiccating, 34 fibre, 1 saw mill, 1 tobacco (cigarette), 5 paddy-husking and oil-pressing, 2 plumbago, 1 printing, timber-sawing, and watering, 1 rice mill, 4 aerated waters, 1 aerated

water and rice-hulling, 1 aerial ropeway worked by oil engine, 1 bottle-washing machine, 1 ice and aerated waters, and 2 electric installations. The first complete compilation of factories was made at the end of 1908, and the total then was 1,025; at the end of December, 1927, it was 1,642, an increase of 617, or about 60 per cent. in nineteen years. Steam power has been used at 309 factories at the end of 1927.

## V.—Communications.

### SHIPPING.

4,244 vessels with a total tonnage of 12,719,600 tons entered the ports of the Island in 1927, as against 4,053 vessels with a tonnage of 11,875,547 in 1926.

The following table shows the classification under the four general heads:—

	1926.		1927.	
	Number.	Tons.	Number.	Tons.
Merchant vessels (with cargo and in ballast) ..	2,765	10,149,934	2,882	10,683,355
Merchant vessels (called to coal and oil) ..	369	1,294,201	413	1,412,691
Native sailing vessels ..	843	83,093	848	85,108
Warships and transports *	76	348,319	101	538,246
	4,053	11,875,547	4,244	12,719,600

\* Warships' displacement tonnage.

The following table shows the distribution of merchant vessels including vessels which called only for bunkers:—

Nationality.	1926.		1927.	
	Number.	Tons.	Number.	Tons.
British ..	2,093	7,072,449	2,249	7,585,186
British Colonial ..	843	83,093	848	85,108
Total British Vessels ..	2,936	7,155,542	3,097	7,670,294
American ..	45	241,470	50	260,634
Belgian ..	3	9,539	7	20,215
Danish ..	35	111,731	20	63,399
Dutch ..	199	919,561	207	985,901
Finnish ..	6	15,187	—	—
French ..	152	774,582	145	796,863
Greek ..	2	4,407	3	7,988
German ..	187	740,122	185	772,895
Italian ..	105	389,236	111	439,803
Japanese ..	214	943,239	197	884,188
Jugo-Slavian ..	—	—	4	12,946
Norwegian ..	60	128,218	88	171,341
Spanish ..	12	28,449	6	14,898
Swedish ..	21	65,945	23	79,989
Total Foreign Vessels ..	1,041	4,371,686	1,046	4,511,060

Excluding warships, transports, and merchant vessels which called only for bunkers, the distribution according to flags was as follows :—

Nationality.	1926.		1927.	
	Number.	Tons.	Number.	Tons.
British	.. 1,828	.. 6,149,067	.. 1,937	.. 6,506,068
British Colonial	.. 843	.. 83,093	.. 848	.. 85,108
<b>Total British Vessels</b>	<b>.. 2,671</b>	<b>6,232,160</b>	<b>2,785</b>	<b>6,591,176</b>
American	.. 43	.. 232,288	.. 50	.. 260,634
Belgian	.. 2	.. 8,216	.. 2	.. 5,970
Danish	.. 33	.. 106,619	.. 17	.. 56,656
Dutch	.. 181	.. 842,279	.. 192	.. 927,342
Finnish	.. 3	.. 7,809	.. —	.. —
French	.. 136	.. 711,582	.. 135	.. 750,469
Greek	.. —	.. —	.. —	.. —
German	.. 160	.. 646,431	.. 166	.. 714,812
Italian	.. 87	.. 335,972	.. 87	.. 363,154
Japanese	.. 205	.. 904,130	.. 192	.. 864,084
Jugo-Slavian	.. —	.. —	.. —	.. —
Norwegian	.. 55	.. 114,409	.. 76	.. 142,348
Spanish	.. 12	.. 28,449	.. 6	.. 14,898
Swedish	.. 20	.. 62,683	.. 22	.. 77,120
<b>Total Foreign Vessels</b>	<b>.. 937</b>	<b>4,000,867</b>	<b>945</b>	<b>4,177,487</b>

### THE COLOMBO PORT COMMISSION.

The number of oil-burning vessels which call at Colombo is steadily increasing, as will be seen from the following figures for the last four years :—

Year.	Number of Vessels burning Oil only.		Number of Vessels burning Oil or Coal.	
1924	..	382	..	92
1925	..	388	..	43
1926	..	457	..	26
1927	..	534	..	41

The largest number of oil-burning vessels which have called at Colombo in any one month since the Oil Facilities were made available in February, 1922, was 57 in May, 1927.

The installation of the six new oil-fired boilers at the Graving Dock was completed in February, and all the boilers have been adapted for coal firing. The installation appears to be most satisfactory, and is now able to meet any likely demands for steam both for Dock and Oil Facilities services for some time to come.

The duplicate 10-inch pipe line for fuel oil from the harbour to Kolonnawa is working very satisfactorily.

The pump house at the Kolonnawa Oil Depôt was enlarged during the year, and a new boosting pump was installed.

The connection of the Kolonnawa Oil Depôt to the general drainage system has been decided upon, and the laying of the sewer in the Depôt will be started as soon as the material has been received from England.

During the year 52 vessels discharged the following quantities of oil :—

				Tons.
Liquid fuel	..	..	..	216,616
Kerosine oil	..	..	..	34,390
Petrol ..	..	..	..	27,581

as compared with the following figures for 1926 :—

				Tons.
Liquid fuel	..	..	..	193,347
Kerosine oil	..	..	..	27,523
Petrol ..	..	..	..	22,691

313 vessels were bunkered with a total quantity of 189,889 tons of fuel oil, as compared with 273 vessels and 172,891 tons of fuel oil in 1926.

The following table shows the number and tonnage of vessels that entered the port during the year :—

	Number.	Tonnage.
Vessels (exclusive of men-of-war, merchant vessels on transport service, and coasting vessels) ..	3,108	11,673,308 (nett)
Merchant vessels on transport service ..	39	304,692 (gross)
Coasting vessels ..	51	60,600 (nett)
Men-of-war ..	62	233,554 (displacement)

The numbers of merchant ships of all nationalities which called at the port in 1913 and 1923–1927, and their nett tonnage, were as follows :—

Year.		Number of Vessels.	Nett Tonnage.
1913	..	2,979	9,475,893
1923	..	2,563	9,006,640
1924	..	2,773	10,013,951
1925	..	2,953	10,858,324
1926	..	2,982	11,054,248
1927	..	2,777	11,631,245

*Lake to Harbour Canal.*—There has been an appreciable increase in the traffic through the Lake to Harbour canal. The total number of lighters, launches, &c., which passed through the canal during the year was 5,623, as against 5,056 in 1926. The goods traffic for 1927 amounted to 11,817 tons of import cargo and 47,458 tons of export cargo, as against 3,325 tons and 41,956 tons, respectively, in 1926. The largest quantity exported *via* the Lake to Harbour Canal in any one month since the opening of the locks in November, 1922, was 5,223 tons in July, and the largest quantity imported in any one month was 1,987 tons in September.

The whole of the San Sebastian canal is navigable by 40-ton harbour barges drawing not more than 4 feet of water, and it is anticipated that the dredging of the canal to 5 feet of water at mean sea level will be completed by the end of February, 1928.

The dredging of the 36 feet area in the harbour as laid down in the programme approved in September, 1924, was completed during the year, and a new programme of work was approved. By this programme the 33 feet area at the Coal Jetties will first be dredged, after which the 36 feet area will be extended through the northern entrance.

Of the 643 acres of low water area of the harbour, 178 acres have been dredged to 36 feet and over, 137 acres to a depth varying between 36 feet and 33 feet, and 139 acres to between 33 feet and 30 feet. The remaining 189 acres have a depth of less than 30 feet.

Six berths are available in both monsoons for vessels drawing up to 33 feet of water. This number will be increased by the addition of two more berths to accommodate vessels of this draft. A safety margin of 3 feet for the berthing of ships has now been introduced. No ship is to be navigated or lie within the harbour with less than 3 feet of water under her bottom, except with the special sanction of the Master Attendant.

Specification and plans for a powerful sea-going tug capable of large towing and salvage work outside the harbour were prepared during the year, and tenders called for, but, as certain alterations have since been made in the original specification, an amended specification is being prepared, and fresh tenders are being called for. On receipt of the tenders an order will be placed for the tug.

It has been decided to provide an ambulance launch for the conveyance of sick and injured persons between ship and shore. One of the Customs launches will be converted to make it suitable for this work. The engine required for the purpose has been ordered, and on its receipt the conversion of the launch will be taken in hand.

A new fumigatorium for the disinfection of plants and seeds imported was erected on the site immediately to the north of the Battery Commander's Post in Commissariat street, and it was brought into use with effect from October 1, 1927.

The construction of the new warehouse (giving an additional warehouse floor area of 31,755 square feet) in the Pettah Warehouse Area was completed in October last. The other two existing warehouses in this area, which are 100 feet wide,

are being enlarged to 130 feet, i.e., the same width as the new warehouse. This enlargement will provide an additional warehouse floor area of 12,000 square feet.

The development of the area between the Lake to Harbour Canal and the Lotus road for the landing of heavy cargo was completed, and an open shed was also erected in the yard. The traffic in this yard is considerable, and steps have therefore been taken for metalling the area round the open shed and flooring the open shed.

The construction of the new Customs House at the Passenger Jetty was continued during the year, and it is anticipated that the building will be completed by the latter part of 1928.

Two steam-driven dynamos were installed at the Graving Dock with a view to increasing the supply of electric light and power at the Graving Dock and Guide Pier, and in order to carry this extra load arrangements are being made to double the mains to the Guide Pier and Dock.

A scheme for the connection of the latrines, bathrooms, &c., for the use of the officers and crews of ships while in Dock to sewers in the same way as other large latrines in the port has been approved, and the materials are on order.

During the year a total number of 26 vessels were docked. 62 vessels were taken on the Patent Slip, and 17 vessels were fumigated.

The receipts from the Graving Dock and Patent Slip brought to account during the year 1927 were Rs. 63,068·03 and Rs. 9,074, respectively, as compared with the previous year's figures, viz., Rs. 63,320·65 and Rs. 9,669·93, respectively. The recoveries on account of the fumigation of vessels during 1927 amounted to Rs. 4,699·53, as against Rs. 2,646·25 in 1926; the increase of Rs. 2,053·28 in the receipts is due to the larger number of vessels fumigated during the year.

*Finance.*—The total expenditure of the Colombo Port Commission for the Financial Year 1926–27, including Rs. 193,388·36 chargeable to Loan Account in respect of the Oil Facilities Scheme and the Government Housing Scheme, was Rs. 3,656,889·96. Of this amount Rs. 158,258·98 was expended by the Public Works Department on work for the Colombo Port Commission, and a sum of Rs. 191,502·82 was expended by the Colombo Port Commission on account of other Departments. The nett expenditure on Colombo Port Commission services, inclusive of expenditure from Loan Funds, was Rs. 3,465,387·14.




The revenue during the same period was Rs. 5,693,310·01, inclusive of Rs. 597,975·51 from the Oil Charges levied at the port and from the rent of the Oil Installations Dépôt.





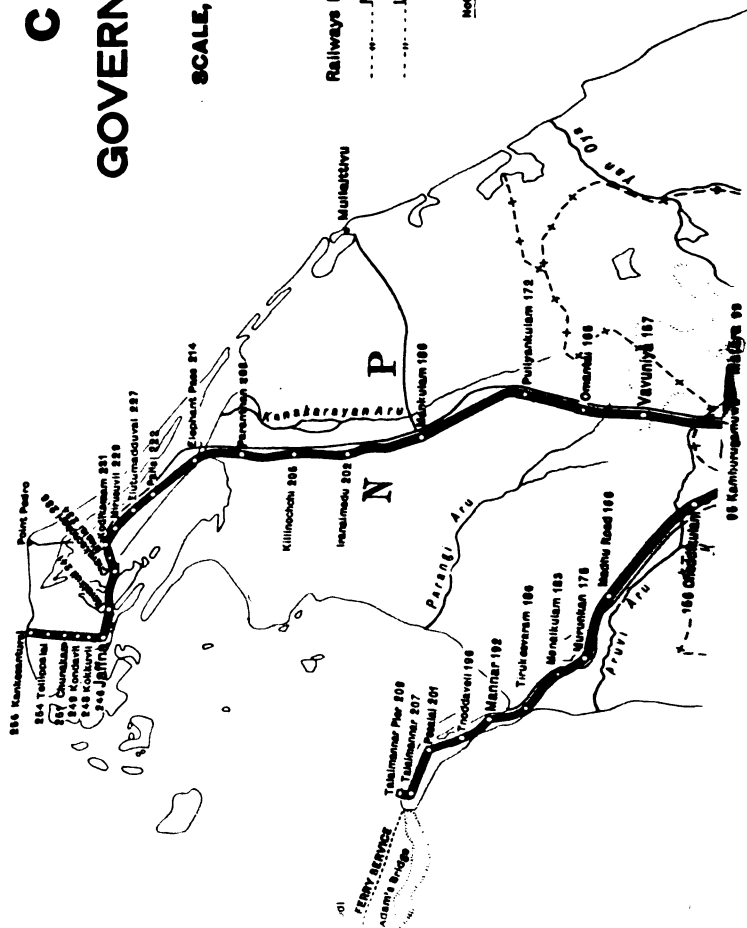
## SCALE, 24 MILES TO AN INCH

**1**  
**1,520,640**

<b>Railways Broad Gauge</b> .....	
<b>Narrow</b> .....	
<b>Under Construction</b> .....	

**Note.**

Figures shown before or after the names of Railway Stations represent mileage from Colombo.



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Green Springs, Colorado

# RAILWAYS.

*Open Line, 1927.*—The total length of the open line on September 30, 1927, was 895 miles, an increase in open line mileage of 44 miles.

The receipts for the year amounted to Rs. 30,111,991, as against Rs. 29,236,369 in the preceding year, or an increase of Rs. 875,622.

The number of passengers conveyed has increased by 4,396,421, the total conveyed during the year being 16,948,655.

Under season tickets the number of ticket holders has increased to the extent of 14,152, the total number of season tickets issued during the year being 208,223.

The number of parcels conveyed during the year was 1,821,640, or an increase of 179,447 parcels.

The tonnage of goods carried has risen from tons 1,522,573 to tons 1,621,636, the noticeable increases and decreases being—

Increases.	Tons.	Decreases.	Tons.
Cocoon produce ..	16,537	Copra ..	11,931
Bricks and tiles ..	5,043	Paddy ..	2,822
Fruits, vegetables, food, cereals and other agricultural produce (locally grown) ..	2,157	Plumbago ..	2,446
Liquid fuel ..	3,582		
Manure ..	13,529		
Petrol ..	2,853		
Sundry goods ..	13,538		
Foreign traffic ..	18,973		
Special train traffic ..	4,365		

The total expenditure for the year was Rs. 20,518,804, or an increase of Rs. 156,140, made up of Personal Emoluments Rs. 975,624, Other Charges Rs. 37,328, Pensions and Gratuities Rs. 22,000, and a decrease under New and Minor Works (maintenance) of Rs. 878,812.

The total capital cost of the Railway amounted to Rs. 200,885,771, the capital account having been increased during the year by Rs. 5,340,753 by the inclusion of the following :—

	Rs.
Batticaloa-Trincomalee Railway ..	1,039,538
Puttalam Railway ..	4,178
Main line duplication ..	73,673
Stations extensions ..	5,629
New and minor works ..	4,389,296
Chief Construction Engineer's and Assistant's salaries ..	94,148
	<hr/> 5,606,462
Less value of Railway property sold and transferred to other departments ..	265,709
	<hr/> 5,340,753

*Note.*—The increases and decreases are based on the corresponding figures for the previous year (1926).

*Colombo Harbour Rail Connection.*

This work provides a rail connection from the main line at Urugodawatta to the harbour in the vicinity of the Graving Dock. It also includes the remodelling of the Wharf station yard and connection of the same to the harbour sidings, and the abolition of the old connection between the Fort station and Wharf station *viâ* the Galle Face.

All work is now completed, with the exception of Bloemendahl road bridge approaches, carrying Bloemendahl road over the railway. The completion of this work has been delayed by very heavy subsidences owing to the marshy ground it is constructed upon, and it has been decided to leave the completion of the work until settlement appears to have ceased.

The total estimate of the work is Rs. 3,921,768, out of which Rs. 3,917,024·80 has been spent to the end of December, 1927.

It will be necessary to provide further funds for the completion of Bloemendahl road.

*Main Line Duplication.*

This work provides for doubling the main line between Ragama and Rambukkana, a distance of 43 miles, with improvements of the grades and curves of the existing line to a maximum grade of 1 in 132 and to a minimum curve of 20 chains radius, new stations at Mirigama, Ambepussa, and Rambukkana, improvements to Alawwa and Polgahawela stations, and remodelling of the station yards at Mirigama, Ambepussa, Polgahawela, and Rambukkana. The work is now completed, and will not be referred to again in the yearly report.

The total estimate for the work is Rs. 7,576,208, out of which Rs. 7,570,342·93 has been spent.

*Puttalam Extension.*

The extension of the Chilaw line to Puttalam is completed, and will not be referred to again in the yearly report.

The total estimate for the work is Rs. 6,994,325, out of which Rs. 6,988,978·34 has been spent.

*Batticaloa and Trincomalee Light Railway.*

This extension is a light railway laid with 46½ lb. rails, a maximum gradient of 1 in 60, and curves of a minimum of 19·10 chains radius.

Since the last report the line has been opened between Gal-ova and Trincomalee for goods on January 19 and for all traffic on May 2.

The whole line is now approaching completion and will be opened for goods traffic on January 4, 1928—the date for opening for all traffic cannot yet be decided.\*

The total estimate for the work is Rs. 22,972,761·36, out of which Rs. 22,454,324·54 has been spent to the end of December.

#### *Kalladi Bridge.*

This bridge consists of six spans of 150 feet and connects the district south of Batticaloa with the terminus of the Batticaloa and Trincomalee Light Railway. The bridge is constructed both for road and rail traffic and will have a footway for pedestrians on one side of the bridge outside the main girder. In the event of the railway being extended southwards to Kalmunai or Nintavur, it will make use of this bridge.

Three of the spans are now erected.

The total estimate for the work is Rs. 957,970, out of which Rs. 865,083·01 has been spent to the end of December.

#### ROADS.

The total length of roads maintained by the Public Works Department during the year was 4,238 miles, of which 3,644 miles are metalled roads, 390 miles are gravelled roads, and 204 miles are natural roads.

#### POSTAL, TELEGRAPH, AND TELEPHONE SERVICE.

On December 31, 1927, 752 offices were open for the transaction of postal business. Of these, 211 (excluding the Central Telegraph Office) were offices dealing with all classes of postal business, viz., mail and parcel work, registration and insurance of postal articles, money order, postal order, and Savings Bank work and telegraph business; at 14 offices all such business except telegraph work was transacted.

At 14 sub-post offices, mail, parcel, registration, money order, postal order, Savings Bank, and telephone-telegram work was transacted; at 112 sub-post offices all such business except telephone-telegram work was transacted; while at 1 sub-post office, 383 village receiving offices, and 17 railway receiving offices mail work only was conducted.

#### MAIL SERVICES.

##### *A.—Foreign.*

A regular weekly mail service between Ceylon and the United Kingdom was maintained during 1927, and 15,547 bags of correspondence and 10,580 bags of parcels arrived from London, while 4,043 bags of correspondence and 3,863 bags of parcels were despatched to London.

---

\* The whole line has been open for all traffic with effect from March 12, 1928.

Fifty-four letter mails were received from London ; of these, 34 were carried by vessels of the Peninsular and Oriental Steam Navigation Company—of which 7 were landed at Bombay and brought overland to Colombo and 27 were brought by sea to Colombo ; and 20 were carried by vessels of the Orient Line.

In the homeward direction 92 mails were despatched to Europe by vessels of the Peninsular and Oriental (61 mails), Orient (14), and Rotterdam Lloyd (17) Lines. The time occupied in transit was 16–19 days from Colombo to London and 16–18 days from London to Colombo ; average  $17\frac{1}{2}$  and 17 days, respectively.

Between Australia and Ceylon an almost regular weekly mail service was maintained by the vessels of the Peninsular and Oriental Steam Navigation Company and the Orient Company ; and the vessels of the Australian Commonwealth Line provided a supplementary service, 5 mails being despatched for Australia by this means during the year.

Regular and frequent services to the Straits Settlements and the Far East were available by the vessels of the Peninsular and Oriental Steam Navigation Company, Messageries Maritimes Company, and the Nippon Yusen Kaisha, Rotterdam Lloyd, and Stoomvaart-Maatschappij Nederland Lines.

The British India Steam Navigation Company's steamers carried mails from Ceylon to Mauritius eight times during the year at irregular intervals. A fortnightly mail service from Colombo to Mauritius *viâ* Bombay, Aden, and Djibouti was started in February, 1924. And another service *viâ* Bombay by B. I. steamers was started in August, 1926, and by this means 5 and 21 mails, respectively, were despatched to Mauritius. The Natal Direct, Indian-African, and Ossen Shosen Kaisha Lines and British India Steam Navigation Company's steamers from Bombay carried 51 mails from Ceylon to South Africa.

Vessels of the Ossen Shosen Kaisha Line carried direct mails to the Argentine *viâ* South Africa.

With India the daily service in each direction by train with ferryboat plying between Talaimannar and Dhanushkodi was maintained. A regular bi-weekly service was also maintained during 1927 between Colombo and Tuticorin by steamers of the British India Steam Navigation Company.

A direct parcel post service with Germany was started from December 5, 1927. The first mail was despatched per D. A. D. G. "Hannover" on December 27, 1927.

#### B.—*Inland Mails.*

Inland mails are carried generally by the Ceylon Government Railway, and from railway stations by private contract motor mail services, bullock coach, or by runner services.

The principal motor mail services are—

	Miles.
Kegalla-Undugoda .. ..	9½
Polgahawela-Kegalla (2 services) .. ..	8½
Kurunegala-Madampe .. ..	39½
Panadure Railway Station-Post Office-Ratnapura .. ..	42½
Panadure Railway Station-Post Office-Ingiriya (2 services) .. ..	20
Gampola-Pussellawa-Ramboda (2 services) .. ..	65½
Anuradhapura-Trincomalee .. ..	102½
Badulla-Batticaloa .. ..	9
Opanake-Balangoda .. ..	28
Kalpitiya-Puttalam .. ..	12
Kahawatta Railway Station-Post Office-Rakwana (2 services) .. ..	50½
Galle-Deniyaya .. ..	6
Halgranoya-Uda Pussellawa .. ..	16
Kodikamam-Point Pedro-Valvettiturai .. ..	20½
Jaffna Railway Station-Post Office-Point Pedro .. ..	71
Matara-Hambantota-Tissamaharama .. ..	16½
Jaffna-Kayts .. ..	10
Jaffna-Pandateruppu .. ..	8
Nawalapitiya-Kotmale .. ..	74·6*
Colombo Town Mail Service-Railway Station-Jetty, &c. .. ..	22·4†
Matale-Dambulla-Kekirawa .. ..	43½
Nuwara Eliya Railway Station-Post Office- Welimada .. ..	16
Colombo Town Mail Service—parcel delivery, collection of letters, parcels, mails, &c. .. ..	235·3*
Batticaloa-Akkaraipattu-Pottuvil .. ..	35·2†
Kalutara-Neboda-Mahagama (2 services) .. ..	67½
Matale-Rattota (2 services) .. ..	29
Batticaloa-Trincomalee .. ..	7
Ella-Namunukula .. ..	87
Matara-Hakmana .. ..	9
Kandy-Rangala (2 services) .. ..	15
Kandy-Hewaheta .. ..	22
Passara-Madulsima .. ..	23½
Kurunegala Railway Station-Post Office .. ..	11
Galle-Udugama .. ..	1
Wattegama-Madulkele .. ..	25
Puttalam Railway Station-Post Office-Nikaweratiya-Kurunegala .. ..	7
Mankulam-Mullaitivu .. ..	53½
Ambalangoda-Elpitiya .. ..	29½
Haputale-Monaragala .. ..	8½
Hatton-Maskeliya-Bogawantalawa (2 services) .. ..	48
Kandy-Kurunegala .. ..	20½
Kadugannawa-Aranayaka .. ..	26½
Talawakele Railway Station-Post Office-Agrapatana (2 services) .. ..	13
Hewaheta-Padiyapelella .. ..	14½
Nawalapitiya-Dolosbage .. ..	16
Mirigama-Pannala .. ..	12
Galle-Baddegama .. ..	14½
Watagoda-Pundul-oya .. ..	12½
Nawalapitiya-Yatityantota .. ..	7½
Anuradhapura-Puttalam .. ..	30
Matale-Galewela .. ..	45
Galle Post Office-Railway Station .. ..	23

\* Week days.

† Sundays.

The inland mail services worked satisfactorily throughout the year, save when interrupted for short periods by floods and washaways.

#### MAIL STATISTICS.

The total number of postal articles, exclusive of parcels, which passed through the post in 1927 is estimated at 101,357,000, about 11 million more than in 1926. The increase was principally in inland correspondence, which comprised over  $76\frac{1}{2}$  per cent. of the total. Correspondence exchanged with India formed nearly  $13\frac{1}{4}$  per cent. of the total, with the United Kingdom about  $5\frac{1}{2}$  per cent., and with other countries nearly  $4\frac{3}{4}$  per cent.

Letters received from the United Kingdom showed an increase of 562,000 compared with 1926. Printed matter, samples, &c., from the United Kingdom showed an increase of about 135,000 compared with 1926.

The total number of parcels dealt with was 1,394,638, an increase of over 197,000 over the 1926 total. Of these, 76,857 were received from the United Kingdom, 273,960 from India, and 15,219 from other countries. 28,279 parcels were received under the Cash on Delivery Service from the United Kingdom, an increase of 1,722 on the last year's total.

#### POSTAGE RATES.

The rates of postage to the United Kingdom and British Possessions, including Egypt, as revised in 1926 continued in operation during the year, viz., 9 cents per ounce or part of that weight for letters, 6 cents each for post cards, and 3 cents per 2 ounces for printed papers. The rates for foreign countries remained the same, viz., 20 cents for the first ounce and 10 cents for every additional ounce, 12 cents each for post cards, and 4 cents per 2 ounces for printed papers.

Articles printed in relief for the special use of the blind are transmitted at a specially reduced rate of 4 cents per 2 lb.

The inland rates of postage on letters, post cards, and printed matter and the rates to India remained unchanged—initial letter rate 5 cents per 2 ounces or part of that weight, post card rate 3 cents, and printed matter 2 cents for every 2 ounces. With effect from April 22, 1927, postage on registered newspapers was reduced from 3 cents to 2 cents without limit of weight.

The total value of stamps sold by the Department in 1927 was Rs. 7,553,397.

The unit rate for inland telegrams was reduced to 30 cents for the first 10 words, including address, from August 1, 1927: the rate for additional words remaining the same, i.e., 5 cents for every 2 words or less.

The rates on telegrams to India remained the same—for first 12 words: ordinary Re. 1, express Rs. 2; with 10 and 15 cents, respectively, for each additional word.

#### MONEY AND POSTAL ORDERS.

The total value of money orders handled in 1927 was Rs. 51,533,038, of which inland orders amounted to Rs. 34,720,658. Of the balance, the business with India formed the largest percentage, orders issued payable in India totalling nearly 13½ million rupees—1 million more than in 1926—a fair proportion of which was due to savings remitted by Indian immigrant coolies.

The business in money orders between Ceylon and the United Kingdom was small—13,563 orders of a total value of Rs. 506,944.

There was an increase in the value of local postal orders issued, Rs. 968,268, compared with Rs. 908,978 in 1926, and an increase in the number of British postal orders paid, which amounted to £8,797. 14s. 6d.

Considerable use was made of the telegraph money order service between Ceylon and India, remittances totalling Rs. 5,154,924 being so sent to India and Rs. 610,098 drawn by Indian remitters on Ceylon.

Comparatively little use, however, was made of the services between Ceylon and the United Kingdom (681 telegraph orders were sent to the United Kingdom and 133 received therefrom), Ceylon and the Federated Malay States (41 orders only being sent and 1,424 orders received), Ceylon and Singapore (35 orders were sent to Singapore and 342 were received therefrom), and Ceylon and Kedah (1 sent, 15 received).

The revenue from money order commission reached Rs. 539,605.

#### POST OFFICE SAVINGS BANK.

The business of the Bank transacted at 225 post offices and 126 sub-post offices continued to expand during 1927, the deposits, which amounted to Rs. 7,818,060, exceeding withdrawals during the year by Rs. 698,539.

On December 31, 1927, the total to the credit of depositors was Rs. 12,323,627.

The rate of interest continued to be 2·4 per cent.—2 cents per month for each complete Rs. 10.

Any sums not less than 25 cents are accepted for deposits up to a nett maximum of Rs. 750 per annum and an interest-bearing total of Rs. 3,000.

Deposits may be made by means of stamped slips. One withdrawal on demand of a sum not exceeding Rs. 10 is allowed in any one week.



### TELEGRAPH SYSTEM.

All important towns in the Island are served by the Government telegraph system.

226 postal telegraph offices were open for public traffic on December 31, 1927, besides several railway telegraph offices. 14 new telegraph offices were opened during the year.

There are 2 telegraph circuits between Ceylon and India, on one of which the Baudot printing machine is employed in duplex working.

Ceylon is connected with the West by direct cables of the Eastern Telegraph Company to Aden and the Seychelles, and to the East with Singapore.

The Government Wireless Station at Colombo is open to all classes of traffic. The station normally transmits on 600 metres "Interrupted Continuous Wave" and has a daylight range of approximately 600 miles. Each even hour "Greenwich Mean Time" transmissions are made on 2,300 metres continuous wave, whilst incoming traffic at these periods is received at 2,100 metres. The duration of this period is approximately 15 minutes, depending entirely on the amount of traffic available.

International time-signals are broadcast at 6.0 hours G. M. T. on 2,300 metres continuous wave, and again at 17.0 hours G. M. T. on 600 metres I. C. W.

A telephone broadcasting service on 800 metres has also been opened and regular daily broadcasts are made at noon, every evening, and on Sundays.

The total number of telegrams handled in 1927 was 2,157,048, some 158,076 more than in 1926. The average time taken in transmission of an inland telegram was 27 minutes.

The total number of messages despatched to India, viz., 273,936, showed an increase of 38,376 over the previous year, but the number received from India, viz., 176,800, showed a decrease of 83,100.

137,692 private cable messages were despatched to and 132,143 received from other countries.

The Colombo Wireless Station dealt with 13,856 messages containing 158,421 words during the year.

The revenue from telegrams was, roughly, Rs. 990,950, and the value of free telegraphic services rendered to other departments was estimated at Rs. 59,757.

### THE TELEPHONE SYSTEM.

Speaking generally, the larger towns are served by Government exchanges and rural areas by private licensed local exchanges linked together by Government junction and trunk lines.

The principal Government exchange is at Colombo (with a sub-exchange at Havelock Town), which is served by underground cable as far as possible. There were 3,037 subscribers to this on December 31, 1927. There is no charge on calls between subscribers to the Central exchange in the Fort and those connected to the Havelock Town sub-exchange, but a surtax is levied to cover the cost of junction service.

The next largest Government exchanges are at Kandy (205 subscribers), Nuwara Eliya (152), Galle (118), Jaffna (71), Kurunegala (63), Negombo (55), Kalutara (65), Panadure (68), Hatton (45), Ratnapura (48), and Gampola (46).

No charge for installation is made for connection to Government exchanges, and a flat rate of subscription is charged for an unlimited service within the prescribed hours.

The minimum subscriptions applicable to premises within 2 miles of the exchange are Rs. 180 per annum for business and Rs. 120 for residential connections in the larger towns.

At the Colombo Fort and Havelock Town exchanges the service is continuous throughout the year, and it is estimated that nearly  $18\frac{1}{2}$  million calls were dealt with in Ceylon in 1927, i.e.,  $1\frac{1}{2}$  million more than in 1926.

The average speed of answer during the day in Colombo was 4.8 seconds, and 96.6 per cent. of calls were answered within 10 seconds.

There were 176 Government call offices in use during the year, and the number of telephone stations reached 8,383. The estimated number of trunk line calls was 385,944, an increase over last year; and junction line amounted to 389,376, also an increase over the 1926 figures. The trunk and junction line fees are fixed on a cent per mile basis. Receipts from telephones totalled Rs. 939,873 in 1927, while the value of telephone services rendered free to other Government Departments was estimated at Rs. 136,427.

The principal trunk telephone lines are—

	Miles.
(1) Colombo-Kandy-Gampola-Hatton-Nuwara Eliya ..	132
(2) Gampola-Pussellawa-Nuwara Eliya ..	34
(3) Colombo-Kalutara-Galle-Matara ..	99
(4) Colombo-Avissawella-Ratnapura ..	64
(5) Colombo-Polgahawela-Kurunegala ..	59
(6) Colombo-Ragama-Negombo ..	23
(7) Kandy-Wattegama-Matara ..	21
(8) Nuwara Eliya-Haputale-Diyatalawa-Bandarawela ..	36
(9) Colombo-Negombo-Chilaw-Puttalam ..	85
(10) Kandy-Kurunegala-Anuradhapura-Trincomalee ..	163

The Government telephone system at the end of 1927 comprised 14,645 miles of overhead and 26,604 miles of underground wire.

There are 35 licensed exchanges, and the largest private systems are—

- (a) The Galaha, Maskeliya, and Norwood systems, with exchanges at those places having 70, 49, and 40 subscribers, respectively ;
- (b) The Talawakele, Bogawantalawa, and Agarapatana systems, with exchanges at those places having 36, 26, and 26 subscribers, respectively ; and
- (c) The Tillicoultry and Kotagala systems, with 26 and 19 subscribers, respectively.

The Neboda private system serves 32 subscribers.

### REVENUE AND EXPENDITURE.

The revenue of the Department in 1927 is estimated at roughly, Rs. 9,399,151. The principal increases were under the head of Postage (some Rs. 548,622) and Money Order Commission (some Rs. 4,084).

The value of free services rendered to other Government Departments, not included in these totals, was estimated at Rs. 1,459,500, but no reliable estimate can be framed of the value of free services rendered by them to the Postal Department.

The total expenditure from the votes of the Postal Department was Rs. 6,943,107.

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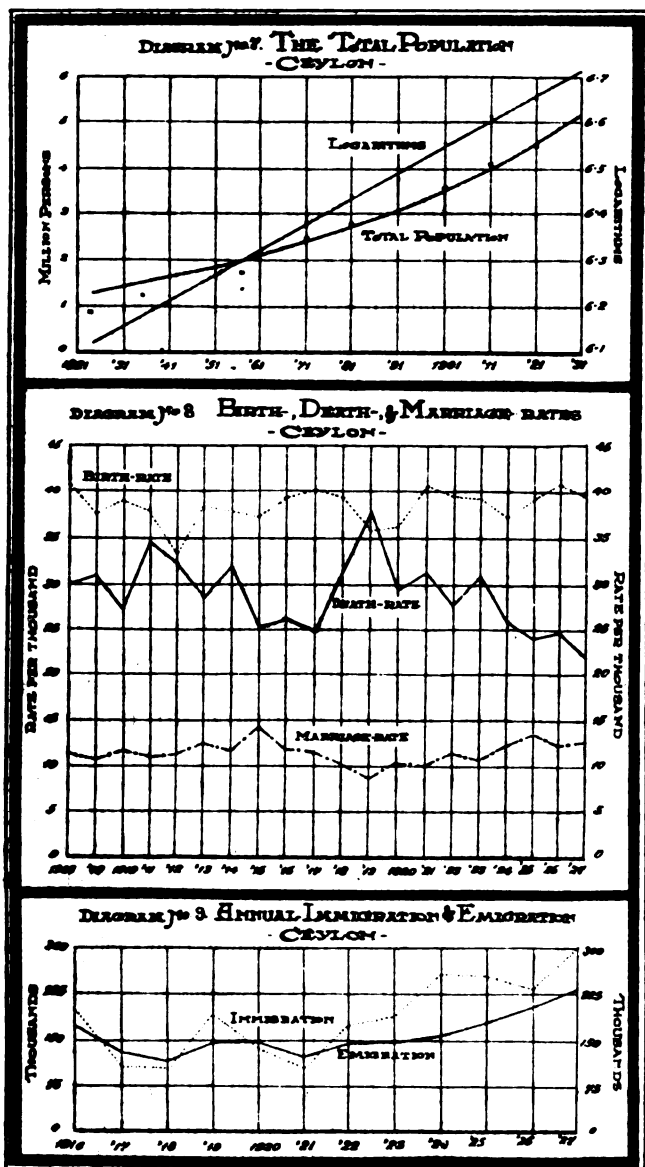
## VI.—Justice, Police, and Prisons.

### THE SUPREME COURT.

**T**HE work of the Supreme Court falls into two main divisions. The first of these is the decision of appeals, and the second is the trial of serious crimes under its original jurisdiction on circuit. The trial of these cases on circuit constitutes the first charge upon the time of the court. The surplus, when these are disposed of, represents the time available for appeals.

#### *Appeal Jurisdiction.*

During the year 1,322 minor appeals (*i.e.*, District Court Criminal Appeals, Police Court Appeals, and Courts of Requests Appeals) were received and 1,297 were disposed of. 726 major appeals (*i.e.*, appeals from District Courts) were received and 798 were disposed of. The total number of appeals decided was thus 2,095. But in addition to these appeals, the court



<p>1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters <math>\alpha</math> and <math>\beta</math>. It is shown that the system has a solution for arbitrary values of the parameters <math>\alpha</math> and <math>\beta</math> if and only if the condition</p> $\alpha + \beta \neq 0$ <p>is satisfied. The case <math>\alpha + \beta = 0</math> is considered separately in the next section.</p>	<p>2. In the second part of the paper the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters <math>\alpha</math> and <math>\beta</math> is considered. It is shown that the system has a solution for arbitrary values of the parameters <math>\alpha</math> and <math>\beta</math> if and only if the condition</p> $\alpha + \beta \neq 0$ <p>is satisfied. The case <math>\alpha + \beta = 0</math> is considered separately in the next section.</p>	<p>3. In the third part of the paper the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters <math>\alpha</math> and <math>\beta</math> is considered. It is shown that the system has a solution for arbitrary values of the parameters <math>\alpha</math> and <math>\beta</math> if and only if the condition</p> $\alpha + \beta \neq 0$ <p>is satisfied. The case <math>\alpha + \beta = 0</math> is considered separately in the next section.</p>
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and the Judges have to deal with a great number of incidental applications and petitions. The figures with regard to these are as follows :—

Applications for leave to appeal in Courts of Requests cases			
disposed of during the year	..	..	84
Applications for sole testamentary jurisdiction	..	..	166
Miscellaneous applications	..	..	494
<i>Habeas corpus</i> petitions	..	..	574
Other petitions	..	..	472
			<hr/> 1,790

The disposal of the civil work of the court is shown in the following table :—

*Disposal of Work for the Year ending December, 1927.*

Number of major appeals disposed of during the year 1927—

(1) Finals—				
Money	..	..	.. 208	} 563
Land	..	..	.. 355	
(2) Interlocutories—				
Ordinary	..	..	.. 178	} 235
Special	..	..	.. 57	
				<hr/> 798

With regard to the interval at which appeals are disposed of the facts are as follows :—Criminal appeals are generally disposed of within about a month of their receipt at the Registry. Courts of Requests appeals are generally disposed of within about six weeks. Ordinary interlocutory appeals are generally disposed of within a month, special interlocutories within two months. District Court finals, however, which constitute the main work of the court, require in ordinary cases from six to seven months to be brought to trial, but this interval has now been reduced to four months, while in certain exceptional cases the interval is shorter.

*Number of Minor Appeals disposed of during the Year 1927.*

(1) District Court criminals	..	..	131
(2) Police Courts	..	..	894
(3) Courts of Requests	..	..	272
			<hr/> 1,297

An important part of the appeal work of the court consists of the decision of those cases which are referred to courts of three or more Judges, generally, though not quite accurately, described as Full Court cases. The number of these cases referred during the year was 10, and the number of days occupied in their consideration was 9.

*Note.*—Including 1 reference under section 19 of the Courts Ordinance, 1889 ; 1 reference under section 355 of the Criminal Procedure Code ; 9 courts of three Judges.

*Trials on Circuit.*

The total number of cases tried at Criminal Sessions throughout the Colony during the year 1927 was 447, and the days consumed in disposing of them were 632. The comparative figures for the last seven years are as follows :—

Year.	Cases disposed of.			Days consumed.
1921 .. ..	..	402	..	445
1922 .. ..	..	296	..	357
1923 .. ..	..	325	..	411
1924 .. ..	..	385	..	442
1925 .. ..	..	373	..	483
1926 .. ..	..	407	..	548
1927 .. ..	..	447	..	632

These cases were distributed among the circuits in the following proportions :—

Western Circuit .. ..	..	182
Midland Circuit .. ..	..	155
Southern Circuit .. ..	..	74
Northern Circuit .. ..	..	27
Eastern Circuit .. ..	..	9
		<hr/>
		447

The cases committed to the Supreme Court consist usually of crime of the following categories :—

- (1) Murder.
- (2) Attempted murder.
- (3) Grievous cases of grievous hurt.
- (4) Gang robbery.
- (5) Offences against women and children.
- (6) Occasional cases of forgery, and various forms of fraud.

Members of the criminal classes very seldom come before the Supreme Court, all habitual criminals being dealt with by the District Courts.

## DISTRICT COURTS, POLICE COURTS, AND COURTS OF REQUESTS.

*Criminal.*

There are 36 Police Courts in the Island and 3 Municipal Courts. 89,341 cases were instituted in the Police Courts during the year 1927, and 86,285 persons were brought up before the Magistrates on summonses or warrants. Of these, 50,856 persons were convicted, 33,126 persons acquitted or discharged, and 2,303 persons committed to superior courts.

There are 22 District Courts in the Island having criminal jurisdiction. During the year under review 1,152 cases were committed before such courts, and 1,840 persons were charged. Of the persons committed for trial, 583 were acquitted, 1,152 convicted, and 8 persons dealt with otherwise. On December 31, 1927, there were still 97 persons awaiting trial.

### *Civil.*

In the 22 District Courts of the Island there were pending on January 1, 1927, 14,862 suits. 13,037 suits were instituted or restored during the year, making a total of 27,899. Of these, 4,565 were disposed of on evidence, 7,592 were otherwise disposed of, *i.e.*, on admission, &c., making a total of 12,157, and on December 31, 1927, there were 15,742 suits awaiting disposal.

In the 41 Courts of Requests in the Island there were pending on January 1, 1927, 9,659 suits. 26,335 suits were instituted or restored during the year, making a total of 35,994. Of these, 2,747 suits were disposed of on evidence, 22,806 were otherwise disposed of, *i.e.*, by default, &c., making a total of 25,553, and on December 31, 1927, there were 10,441 suits pending

## POLICE.

### *Strength of the Force, &c.*

The following table gives the sanctioned and actual strength of the Force on December 31 :—

			Sanctioned.	Actual.
Inspector-General	..	..	1	1
Deputy Inspectors-General	..	..	2	2
Superintendents, Assistant Superintendents and Probationers	..	..	36	34
Inspectors and Sub-Inspectors	..	..	181	179
Sergeants-Major	..	..	2	1
Sergeants	..	..	364	351
Constables	..	..	2,498	2,512
<i>European Police Force,</i>				
Chief Inspector	..	..	1	1
Inspectors and Sub-Inspectors	..	..	4	4
Sergeants	..	..	28	26

On April 12 the Force was short by 194 Constables.

It was mentioned in the Police Administration Report of 1926 that, with a shortage of 178 Constables on December 31, 1926, the position was becoming acute, and that the solution to the difficulty was to give effect to the recommendations of the Select Committee of the Legislative Council appointed to inquire into the conditions of service in the Police Force. The recommendations of the Committee were finally given effect to on March 1, and from that date every Constable was placed



on an annual incremental scale of salary; good conduct allowances were increased, and the issue of khaki uniform and free cleaning materials approved. These improvements in the conditions of service were brought to the notice of the public by illustrated recruiting posters and the co-operation of all ranks of the Force and of headmen in obtaining recruits was sought. The improvements in the conditions of service had the anticipated effect, and on December 31 the Force was fully up to strength, and a better type of recruits than has been enlisted in the past has been attracted to the Force.

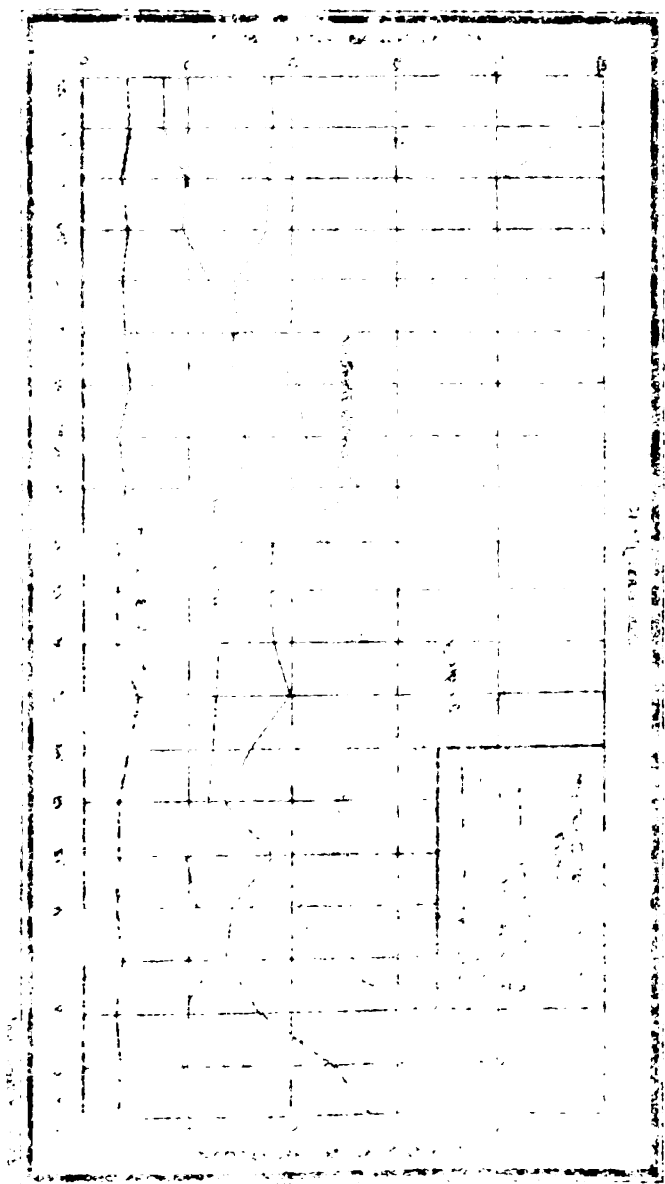
During the year 2,920 applications for enlistment as Constables were received. Of this number 542 or  $21\frac{1}{2}$  per cent. were enlisted. 1,978 applicants were personally examined at the Training School. 51 *ex* Constables re-applied for enlistment, of whom 24 were enlisted; of these, 8 were recruits who had resigned during the year. 22 boys were enlisted from the Police Boys' Brigade on reaching the age required for enlistment in the Force.

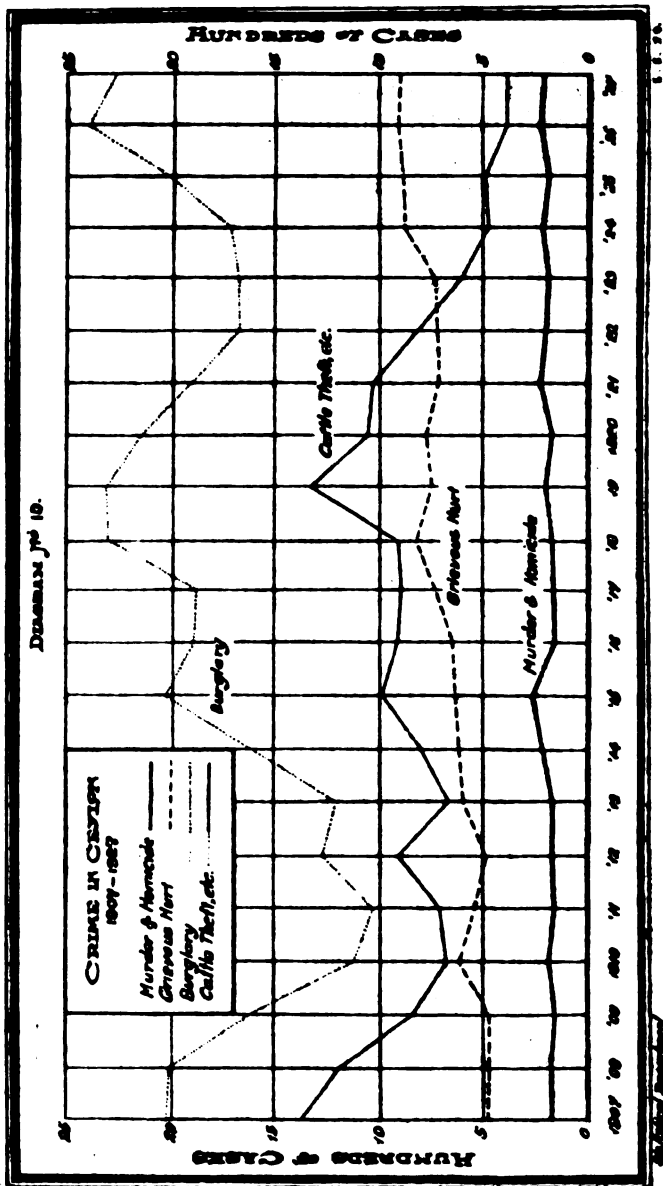
544 applications for enlistment as Sub-Inspectors were received; 20 Sub-Inspectors were enlisted; this is equivalent to  $3\frac{1}{2}$  per cent. only of those who applied for enlistment.

There are in the Force 15 officers who have risen from the rank of Inspector, Sub-Inspector, or European Sergeant, and 33 Inspectors or Sub-Inspectors who have risen from the rank of Sergeant or Constable. There are 4 Inspectors, 18 Sub-Inspectors, 77 Sergeants, and 210 Constables whose fathers have been or are still in the Force.

*Education.*—Of the Sergeants and Constables, 42 per cent. can read and write English and 52 per cent. can speak English. These figures compare very favourably with those for 1921, viz. 33 per cent. and 43 per cent., respectively. 15 Sergeants and Constables are unable to read or write any language; these men were all enlisted many years ago, and their number is annually diminishing owing to men being pensioned or otherwise leaving the Force. In 1921 30 Sergeants and Constables were unable to read or write any language.

The granting of an allowance of Rs. 5 per mensem to Constables who have passed the VII. or a higher standard in English, and Rs. 3 per mensem to those who have passed the V. or VI. standard, has had good effect in inducing men to learn English. 253 Constables are drawing Rs. 5 per mensem, and 197 Constables are drawing Rs. 3 per mensem English allowance. Special classes are held at the Training School and at almost every Police Station in the Island for teaching English. The monthly average number of men who attended the English class at the Training School was 98. In some cases the Constables engage





a teacher themselves, in other cases Police Officers in charge of Stations and Sergeants or Constables who have a good knowledge of English have taken classes. Many Constables who have passed examinations entitling them to draw the smaller allowance have continued to learn English and have become entitled to the higher allowance by passing the necessary examination. Many Constables who could not read or write English on enlistment have since passed the necessary examinations and are drawing English allowance.

Of the 419 Recruit Constables who passed out of the Training School during the year, 76 had passed the VII. or a higher standard and 59 the V. standard in English. 60 per cent. of recruits who passed out of the Training School could read and write English. Of the Constables enlisted during the year, 1 had passed the Cambridge Junior Examination and 7 had passed the Elementary School-leaving Certificate Examination.

### *Crime.*

*General.*—Offences against the Penal Code dealt with during the year numbered 16,044. Of these, 11,658 were disposed of by the courts as true cases.

The following statement shows the number of cases of crime disposed of, as true, by the courts during the last three years :—

	1925.	1926.	1927.
Homicide ..	184 ..	223 ..	208
Attempted homicide ..	89 ..	88 ..	107
Grievous hurt ..	880 ..	909 ..	899
Hurt with dangerous weapons ..	1,299 ..	1,363 ..	1,407
Burglary ..	2,010 ..	2,405 ..	2,272
Theft of cattle ..	485 ..	385 ..	388
Other offences ..	2,703 ..	3,334 ..	3,336
Total ..	<u>7,650</u>	<u>8,707</u>	<u>8,617</u>

The statistics of crime for the last six years under the three main heads: "Offences against the Person" (which are not directly preventable by Police action), "Offences against Property," and "Offences against the State" (riot, &c.) are as follows :—

Year.	Total Crime.	Offences against the Person (excluding Robbery).	Preventable Crime, Offences against Property (including Robbery).	Offences against the State.
1921 ..	7,640 ..	2,122 ..	5,494 ..	24
1922 ..	7,045 ..	2,212 ..	4,805 ..	23
1923 ..	6,497 ..	2,020 ..	4,444 ..	33
1924 ..	6,933 ..	2,433 ..	4,469 ..	31
1925 ..	7,650 ..	2,668 ..	4,947 ..	35
1926 ..	8,707 ..	2,755 ..	5,914 ..	38
1927 ..	8,617 ..	2,798 ..	5,760 ..	59

From these figures it will be seen that there has been very little alteration in the state of crime during the last two years.

*Offences against Property.*—Offences against property can, to a great extent, be prevented by a thorough system of Police patrols and beats, and by a careful supervision over the well-known criminals or suspected criminals. A feature of crime of this nature during the year was the increased use made of rapid means of conveyance, chiefly motor vehicles, and of the use of electric torches by burglars and other criminals. The Ceylon criminal is quick to adapt himself to modern conditions, and the use of electric torches in the commission of crime is a striking illustration of this fact.

Comparing the number of serious offences with the population (4,497,686—1921 Census Report) it will be found that—

In the Colombo City	there is 1 case of crime to every 173 persons.		
In the Western Province	do.	480	do.
In the North-Western Province	do.	486	do.
In the Province of Sabaragamuwa	do.	542	do.
In the North-Central Province	do.	558	do.
In the Central Province	do.	660	do.
In the Southern Province	do.	723	do.
In the Northern Province	do.	763	do.
In the Province of Uva	do.	829	do.
In the Eastern Province	do.	853	do.

The proportion of serious crime to population in Ceylon is 1 case of serious crime per annum to every 522 persons.

*Murder.*—The following statement shows the incidence of true cases of murder disposed of in 1927 compared with the two previous years :—

1925.		1926.		1927.
184	..	223	..	208

The proportion of murders to population in Ceylon is 1 per 21,623 persons, as against 1 per 67,000 persons in Kenya and 1 per 13,000 persons in Cyprus.

*Gang Robbery.*—The following statement shows the number of cases of gang robbery committed during the last three years :—

1925.		1926.		1927.
26	..	9	..	21

Gang robbery is the worst type of crime with which the Police have to deal. It is a premeditated crime, at times accompanied by cold-blooded murder and rape, although the latter is seldom admitted by the victims.

*Burglary.*—The figures for the last three years are as follows :—1925, 2,010 ; 1926, 2,405 ; 1927, 2,272. Burglary constitutes almost one-fourth of the total serious crime in the Island. The offences are usually committed on dark nights so that eye-witnesses are seldom available ; detection is, therefore, difficult. Burglary is a premeditated crime committed almost exclusively by the professional criminal.

*Theft.*—The following are the figures showing the number of cases disposed of by the courts as true cases :—

Year.				Theft.
1925	..	..	..	1,896
1926	..	..	..	2,560
1927	..	..	..	2,524

Thefts of tea, green tea leaf, and tea stumps have been prevalent in the tea planting districts, but a great deal has been done to prevent them by adopting a system of preventive measures specially applicable to this type of crime; 101 prosecutions were entered by the Police of the Central Province alone for illegal possession of leaf, removing tea plants without a permit, &c.

Thefts of rubber have decreased from 336 cases in 1926 to 127 in 1927; of the 336 thefts of rubber in 1926, 120 cases were reported from the Kalutara District, but as a result of rounding-up a gang of rubber thieves thefts of rubber in the Kalutara District were reduced to 36 cases in 1927.

*Municipal and Statutory Offences.*—These cases constitute all offences against the law, except cases such as theft, murder, house-breaking, &c., which have been classified under the head "Crime." The following statement shows the action taken to deal with such offences :—

Year.			Total Prosecutions		Total Convictions.
1920	..	..	24,429	..	22,178
1923	..	..	30,540	..	27,362
1926	..	..	45,482	..	38,985
1927	..	..	51,191	..	44,518

*Firearms.*—658 prosecutions were entered under the Firearms Ordinance. These figures include the prosecutions of 8 unlicensed firearm repairers and 4 unlicensed manufacturers.

The number of new firearms purchased has increased annually during recent years.

Gun licences were issued as follows :—

1925.		1926.		1927.
56,251	..	59,911	..	66,268

The following figures show the number of cases in which persons have been injured by firearms :—

Year.				Cases.
1923	..	..	..	61
1924	..	..	..	54
1925	..	..	..	67
1926	..	..	..	80
1927	..	..	..	93

During 1927 30 cases of murder were committed by the use of firearms.

*Cocaine, Opium, and Ganja Smuggling.*—335 prosecutions were entered by the Police for the illegal possession of opium. 84½ pounds of opium was seized. The number of prosecutions in 1926 was 165, and 255½ pounds of opium were seized. It has been pointed out in reports of previous years, that in view of the fact that the amount of opium which can be obtained through licensed consumers annually becomes less, as no new licences to consume opium have been issued since 1910, an increase must be expected in the amount of opium which is illicitly imported for consumption by unlicensed consumers. The increase in the number of prosecutions entered by the Police for illegal possession of opium compared with previous years is an indication of the effort which is being made to prevent the importation and illegal possession of opium. The amendment of the law, which will enable Excise Officers to search for and seize opium, is at present being considered by the Legislative Council; under the existing law the Police only have power to search for and seize opium. 376 prosecutions were entered by the Police for the illegal possession of bhang, ganja, and *Cannabis Indica*. In 1926 there were 189 such prosecutions. 237 pounds of ganja was seized in 1927, compared with 113½ pounds in 1926.

There were no prosecutions for illegal possession of cocaine, neither is there any evidence to prove that this drug is at the present time being imported into Ceylon.

*Youthful Offenders.*—A training school where youthful offenders can be taught a trade and brought up to be useful citizens instead of becoming re-convicted criminals is one of the greatest needs of the Colony. The question of starting a "Training School for Youthful Offenders" was raised first in 1911; and in 1913 an officer of the Ceylon Civil Service was deputed to visit the Borstal Institute in England and report on the working of the institution. The outbreak of war, however, and the necessity of retrenchment prevented further progress with the subject. The question of starting a Borstal Institute was again raised in 1920, when a Committee was appointed by Government to report on the practicability and advisability of starting such an institution; but, owing to lack of funds, Government was unable to give effect to the recommendations of the Committee. In 1923 the Salvation Army offered to start a Borstal Institute on a small scale, provided the cost of putting up the buildings was met by Government. The Finance Committee of the Legislative Council were, however, of opinion that such an institution should be maintained and managed entirely by the State; and the scheme was dropped. In November, 1927, a Committee (which is at present sitting)

was again appointed by Government to consider the various schemes for the reform of juvenile criminals and to recommend which system should be adopted. During the year 4,441 first offenders were convicted of serious crime. Of these, 1,663 or 37 per cent. were youths between the ages of 15 and 21. 371 youths were re-convicted during the year. The fact that of the serious crime committed in the Island 2,034 (39 per cent.) out of the 5,192 persons convicted were youths between the ages of 15 and 21 is clear proof of the urgent need for a training school.

It seldom, if ever, happens that a youth commits an offence such as gang robbery or cattle stealing; neither do we find youths committing forgery or counterfeiting coins; these are offences which require premeditation, and which youths are physically or mentally incapable of committing. Crime committed by youths is practically confined to petty theft; in many cases articles are stolen with the one desire to obtain food and clothing; an entirely different criminal instinct to the premeditated act of a clerk who already has employment and a good salary and who falsifies account books or forges his master's signature in order to obtain wealth.

It is agreed by all who have had experience of maintaining and managing Borstal institutes and reformatories for youths that, in spite of the fact that the percentage of youths who after release turn out good citizens, it is in every way better that steps should be taken to try to prevent youths ever coming before the courts and ever being sent to a Borstal or other similar institute. The fact that a man was once an inmate of a penal institution may, at any stage of his career, be brought up against him by some vindictive person.

A great deal can and is being done to obtain employment for homeless youths. By finding employment for a youth the necessity for stealing in order to obtain food and clothing is automatically removed, and provided the youth has no real criminal instincts he will not again commit crime.

Clubs for street boys are maintained in the Pettah, Colombo, and in Galle, Kandy, and Panadure. A club for working boys has also been started at Slave Island in Colombo. The police at the majority of headquarter stations have got into touch with homeless and destitute boys, and have helped the boys by finding employment for them and by encouraging them to attend school, to play games, and generally to lead an honest life.

The combination of the clubs for homeless boys, the efficient working of a probation system, the maintenance of a training school for youthful offenders, and the after-care by an association which will provide for the supervision of boys released



on licence from the training school should do a great deal towards solving the problem of the youthful offender in Ceylon. The problem cannot be dealt with by adopting only one or two of these measures; they are all essential and supplement each other. It is hoped that provision will be made at an early date for a good "Probation System" and for starting a "Training School for Youthful Offenders."

### *Control of Traffic.*

*Central Registering Authority for Motor Vehicles.*—Under the old law the owner of a motor car had to pay his tax to one authority and register the vehicle and obtain a driving licence from another authority, viz., the Registrar of Motor Cars, which appointment was held by the Inspector-General of Police. The examination of vehicles plying for hire and the testing of applicants for driving licences was carried out by local authorities without co-ordination. It was recommended by a committee appointed in 1925 to report on traffic in Ceylon that there should be one central authority for the registration, taxation, and licensing of all motor vehicles and drivers. This recommendation has been carried into effect by the new Motor Ordinance, which provides for a separate Registrar of Motors under the Department of the Registrar-General, and takes effect from January 1, 1928. The police will, therefore, be relieved of their responsibilities of examining and licensing motor vehicle drivers and of registering motor vehicles from that date.

The total number of motor vehicles in the Island in 1918 was 3,773; on December 31 there were 17,340 motor vehicles, they were registered as follows:—

Motor cars registered for private use	..	..	9,071
Motor cars registered for the conveyance of passengers for hire	..	..	1,339
Motor buses and lorries registered for the conveyance of passengers for hire	..	..	2,331
Lorries registered for the conveyance of goods, private and for hire	..	..	1,676
Motor cycles	..	..	2,923
			<hr/>
			17,340

The following figures show the increase in the last seven years in motor buses and lorries licensed for the conveyance of passengers for hire:—

1920	..	..	..	72
1923	..	..	..	356
1926	..	..	..	2,146
1927	..	..	..	2,331

The following figures give a good idea of the rapidity with which motor vehicles are being imported :—

In 1922 there was 1 motor vehicle to every 757 persons in the Island.

In 1926 there was 1 motor vehicle to every 498 persons in the Island.

In 1927 there was 1 motor vehicle to every 259 persons in the Island.

The number of motor driving licences shows a corresponding increase, from 9,621 in 1924 to 22,090 on December 31.

*Regulation and Control of Motor Traffic.*—There were 15,955 prosecutions under the motor by-laws. In 1923 only 1,685 prosecutions were entered. This large increase in the number of prosecutions is an indication of the extra work imposed on the Police and on the courts by the increase in motor traffic. Of the 15,955 prosecutions, 2,487 were for exceeding the speed limit, 1,084 for reckless or careless driving, 322 for driving without carrying on the vehicle the licence to drive, 27 for not reporting at the nearest police station accidents involving serious injury. It is satisfactory to note that in spite of the increase in the number of accidents there has been a decrease in the number of accidents which have not been reported immediately at the nearest police station.

The number of accidents caused by motor vehicles throughout the Island was 2,087; 292 of these were serious accidents, of which 107 proved fatal. In 1926 there were 258 serious accidents, of which 109 proved fatal. In view of the large increase in motor traffic during the year it is satisfactory to note that there has been very little increase in the number of serious accidents and that there were fewer fatal accidents. In spite of the small percentage (13 per cent.) of motor buses compared with other motor vehicles, 56 per cent. of the serious accidents caused by motor vehicles in the Provinces only and 30 per cent. for the whole Island were caused by motor buses. 18 per cent. of the serious accidents caused by motor buses proved fatal. The following figures show the action taken to control the speed of motor vehicles and to check rash and negligent driving :—

Year.	Number of Motor Vehicles on the Road.	Number of Prosecutions for exceeding the Speed Limit.	Number of Prosecutions for Reckless or Careless Driving.	Fatal Accidents only.	Total Serious Accidents, including Fatal Accidents.
1923	7,288	235	189	38	82
1924	9,029	709	438	69	171
1925	11,773	1,259	830	73	230
1926	14,947	1,913	984	109	258
1927	17,340	2,487	1,084	107	292

Of the 292 serious accidents it was found that—

- (a) In 138 cases the accident was due to carelessness on the part of pedestrians.
- (b) In 120 cases motor vehicles collided.
- (c) In 57 cases the condition of the road was the cause or a contributory cause of the accident.

It is satisfactory to note that the number of serious and fatal accidents have not increased in the same proportion as the increase in the number of vehicles.

The control of motor traffic on the important main roads has got beyond that which can adequately be exercised by the police in the ordinary course of their duty, and it has been found necessary to start special police patrol cars. Three such motor patrols were started in December on the Colombo-Kandy, Awissawella-Colombo, Panadure-Colombo, and Panadure-Kalutara roads. The duties of these police patrol parties will be to prevent and inquire into all motor offences and accidents on these beats.

*Motor Vehicles and Crime.*—The use of motor vehicles in the commission of crime is yearly becoming more common, both as a mode of conveyance to and from the scene of crime and as an easy and rapid means of removing stolen property. As instances of this the following cases are quoted :—

In a case of gang robbery, which occurred at Yapame in the Province of Uva, the robbers came in a bus from Panadure—a distance of 190 miles. In three large tea thefts, which occurred in the Central Province, the culprits were caught while removing the tea in hiring motor cars. A number of cases are reported from various parts of the Island in which motor cars have been used in order to abduct girls. In one case a girl was abducted by motor car and taken to a village 85 miles away from her home. Motor cars are frequently used for the conveyance of illicitly imported opium from Jaffna and Chilaw to Colombo. In the Kalutara District motor buses owned by a private individual were used for the conveyance of stolen rubber in a large number of cases.

*Control of Bullock Cart Traffic.*—In order to minimise accidents on the narrow winding roads of this Island it is essential that attention should be paid to obstruction and other offences committed by the drivers of bullock carts and other slow-moving vehicles. During the year 8,804 prosecutions were entered against the drivers or owners of such vehicles.

With a view to minimising accidents in towns all available police are detailed for duty once a fortnight in the city of Colombo, and at regular intervals in the case of some of the

larger towns, to make pedestrians walk on the right of the road so that they see and meet face to face all traffic approaching them.

In towns where there is a large volume of motor traffic broad pavements for the use of pedestrians are essential. Since 1919 instruction in the rule of the road has been given in all schools.

### *Criminal Investigation Department.*

The Criminal Investigation Department includes the Harbour Police, the Foreshore Police, the Train Police, the Photographic Branch, and the Finger Print and *Modus Operandi* Bureaus.

Police Forces of other countries are continually asking the Ceylon Criminal Investigation Department to report on travellers who may pass through Colombo owing to its position as the central port of the East. The Criminal Investigation Department, therefore, keeps records of all persons arriving in and leaving Ceylon, all persons staying in hotels, boarding houses, and resthouses, and of all foreigners.

*Modus Operandi Bureau.*—The *Modus Operandi* Bureau, which was started three years ago for the purpose of registering and card-indexing the methods employed by criminals in committing crime, is still in its infancy. Only crimes which show that a definite *modus operandi* has been employed are classified.

*The Photographic Branch.*—The importance of photographic work in the investigation of crime is becoming more apparent every day, and the work of this branch is increasing rapidly.

*Finger Print and Foot Print Bureaus.*—During the year 1,441 finger print slips of first offenders were added to the collection. 15,562 finger print slips of persons were received for identification, and of these 2,838 were identified as having been previously convicted, namely, 18 per cent. 69,337 finger print slips of males and 823 of females are on record in the bureau.

There are 10,376 re-convicted male criminals and 27 female criminals in the Island. 751 male offenders and 10 female offenders were re-convicted in the course of the year. 970 re-convicted criminals were under police supervision by order of court, and 332 re-convicted criminals were at large on order of licence on December 31.

Every man sentenced to imprisonment for burglary and dangerous criminals who have been sentenced to imprisonment for cattle theft or theft from a dwelling are foot printed before being discharged from prison. 548 foot print slips are on record; of these 133 slips were taken during the year.

*Strikes.*—In February about 5,000 coolies working in Colombo harbour and wharves struck work as their demands for higher wages were refused. They remained on strike for nearly three weeks. The strike was eventually terminated by a settlement brought about by an Arbitration Board. A great deal of extra work was thrown on the police by the strike. A strong party of sergeants and constables was posted in the strike area for duty day and night, labour was requisitioned from the jails, and police escorts were supplied to all who desired to work.

*Registration of Servants.*—The police attend to the registration of servants at Colombo, Kandy, Nuwara Eliya, and Matale. During the year 2,164 applications for registration were received and 3,665 new engagements were recorded. Further registration was stopped in the case of three servants who were convicted of crime. Of the servants who applied for registration, previous convictions were traced in 56 cases by reference to the Finger Print Bureau.

*First Aid to the Injured.*—The Ceylon Police Corps of the St. John Ambulance Association was formed in 1912. A sound knowledge of first aid is essential to police in a country where crimes of violence, especially “hurt by knife,” are so common.

The Ceylon Police Corps has increased from 132 members in 1912 to 1,363 in 1927. In an Island like Ceylon, surrounded by the sea, with rivers frequently in flood, and where the majority of the inhabitants bathe in lakes and rivers drowning cases are frequent, and it is essential that every police officer should have a knowledge of swimming and a knowledge of how to render artificial respiration. All ranks passing through the Training School are taught to swim, and no man is passed out of the school until he has learnt to do so. All ranks of the Force, whether in possession of First Aid Certificates or not, are required to be able to render artificial respiration.

*Police Boys' Brigade.*—The Police Boys' Brigade, composed of the sons and relatives of the members of the Force, has on its strength 68 senior and 358 junior boys. It was instituted to provide healthy exercise, recreation, and education for the sons and relations of police officers and pensioners and to train them to become useful men. The brigade has been in existence for a number of years and forms a valuable recruiting ground for the Force.

*Pensioners' Corps.*—The corps was instituted in 1908 to assist men of good conduct who are no longer fit for active duty in the Force to supplement their pension on retirement by

obtaining posts as watchers and caretakers, and provides the public with a supply of steady, reliable men for positions of trust. There are 322 pensioners in the corps.

*Cost.*—The cost of the Force for the year was Rs. 3,326,512. The cost of police per man is Rs. 1,067, and the cost per head of population is 74 cents or  $11\frac{3}{4}d$ . The cost of the police per head of population in Ceylon is low compared with the cost in other countries, *e.g.*, Mauritius Rs. 2·53, Cyprus 4s. 7d., Western Australia 10s. 11d., and £1. 0s.  $2\frac{3}{4}d$ . throughout England and Wales. In the Metropolitan Police the cost per man is £363 a year, in Kenya £55. 11s. 0d., in Cyprus £95, while in Ceylon the cost is £80. 5s. 0d. The proportion of police to population is 1 police officer to 1,446 persons, which is low compared with 1 to 279 in the Straits Settlements, 1 to 335 in the Federated Malay States, 1 to 465 in Cyprus, 1 to 259 in Mauritius, and 1 to 759 in Western Australia.

*Police Stations and Offices.*—There are 164 Police Stations and 27 Police Offices in the Island.

### PRISONS.

There was an increase of 87 in the total number of admissions of convicted prisoners of Ceylon during the year 1927, excluding Road Ordinance defaulters, of whom there were 4, as against 47 in 1926.

The figures are as follows :—

1926	..	..	..	8,124
1927	..	..	..	8,211

The number of prisoners sentenced to death was 55, as against 68 in 1926. There were 38 executions during the year, as against 45 in 1926.

Of the 38 whose capital sentences were carried out, 30 were Sinhalese, 5 Tamils, 1 Malayalee, 1 Malay, and 1 Moor.

Of the number executed, 2 had been sentenced in 1926; and of the number sentenced to death, 2 were executed in 1928.

There were 9 escapes and 8 recaptures during the year.

The total number of deaths in prisons was 43, as against 78 in 1926; and the death rate per 1,000 of the admissions during the year was 3·05, as against 5·60 in 1926, and 5·06 in 1925.

The number of punishments inflicted during the year on prisoners for prison offences was 764, as against 698 in 1926 and 1,057 in 1925.

Prisoners are in all prisons employed upon work of public utility and remunerative industrial labour. At Welikada and Bogambra prisons various trades are taught, such as carpentry, blacksmith, goldsmith, and tinsmith work, bootmaking,

tailoring, the making of cane furniture, matting, coir brooms, rugs, mats, coal and tea leaf bags, ropes, strings, bamboo tats, laundry work, printing, bookbinding, and masonry works.

During the year under review 2,369 articles of wooden furniture were turned out by prison labour for various Government Departments. For making up furniture for the Government the Forest Department supplied 12,945 cubic feet of various timber in logs. Cutting, planing, &c., of timber was done by machinery.

The Government Printing Office employed a daily average of 100 prisoners from Welikada Prison, and this was discontinued on instructions from Government as from August 25, 1927. This prison also continues to wash all soiled linen from the Medical and Railway Departments, &c., 1,256,649 pieces being dealt with during the year.

16,561 articles of clothing and bedding were made up for the Colonial Storekeeper, and 37,721½ yards of cloth woven for prison use.

The prisoners at Mahara Prison are exclusively employed in the quarries on account of Harbour Works and Public Works Department.

A daily average of 196 prisoners were employed in the Harbour Works quarry during the year as blacksmiths, carpenters, platelayers, stone dressers, stone breakers, excavation and other works in connection with the working of the quarry.

The following quantity of metal have been dealt with :—

2-inch metal broken	..	..	44,735 bushels
½-inch metal broken	..	..	931½ barrels
¾-inch metal broken	..	..	707 barrels
¾-inch metal broken	..	..	1,159 barrels
Hand rubble turned out	..	..	4,762 tons
Stone setts made	..	..	15,620 setts
¾ chips turned out	..	..	568 barrels

The Karaiyoor reclamation works at Jaffna continue to make good progress. The daily average number of prisoners employed on the works was 165·08. The extent of land reclaimed was 2 roods and 16 perches. Re-levelled 5 acres 3 roods and 10 perches.

At Anuradhapura 42 prisoners are daily employed on account of anti-malarial campaign in filling up pools of the town. weeding, clearing jungle, &c. |

For the Forest Department prisoners are employed in clearing jungle and planting teak, margosa, rosewood, &c., at Palugama. Also for the Local Board prisoners were employed in breaking metal.

The schools at Welikada and Mahara for prisoners of the age of 23 years and under on admission to prison having a sentence of six months and over make satisfactory progress, the daily average attendance being 105 during the year.

## VII.—Public Works.

**T**HE total expenditure of the Public Works Department has increased from Rs. 3,437,862 in 1896 to Rs. 21,562,759 in 1927, the latter figure showing an increase of Rs. 2,008,253 over that of 1926. The average annual expenditure during the past thirty-two years has been Rs. 8,658,301.

Amongst the more important works carried out or in course of construction may be mentioned the following :—

*General.*—New Council Chamber and Secretariat; new bungalows for the Principal and the Vice-Principal, Government Training College; extensions to the Surveyor-General's Office; Biological Laboratory, University College; new Customs House at Passenger Jetty, Colombo; improvements to Colombo Museum; improvements to Welikada Prison; additions and alterations to the premises vacated by the Colombo and Pettah Libraries; improvements to District Court, Colombo; new Factory, Kolonnawa; extensions to Record Room, Registrar-General's Office; Police Magistrate's quarters, Panadure; new court-house, Panadure; extensions of warehouse No. 2, Kalutara; additions to Ambepussa Farm; new library, Peradeniya Gardens; new Residency, Matara; new Supreme Court and District Court, Galle; additions to Galle Kachcheri; additions and improvements to jetties, Galle harbour; additions and improvements to Land Registry, Matara; conversion of Rice Mill building, Anuradhapura, into quarters; new quarters for Police Magistrate, Point Pedro; new Customs buildings, Talaimannar; quarters for District Judge, Anuradhapura; Land Registry and Office for the Provincial Registrar, Anuradhapura; new Post Office, Kahatagasdigiliya; new court-house and quarters for staff, Kalmunai; additional Government bungalow, Kurunegala; Telegraph Inspector's office, store, and bungalow, Maho; quarters for Supervisor, Eastern Saltern, Puttalam; quarters for Salt Inspectors, Puttalam; improvements to Land Registry, Kurunegala; extension of Kurunegala Kachcheri; improvements to Puttalam Kachcheri; new Post Office, Bandarawela; Survey Office, Diyatalawa; Excise Office, Badulla; quarters for Surveyors, Diyatalawa; additions and improvements to Survey huts, Diyatalawa; additions and



improvements to Ceylon Defence Force Camp buildings, Diyatalawa ; Government quarters, Ratnapura ; extensions to Land Registry and Assistant Provincial Registrar's Office, Kegalla ; conversion of Provincial Engineer's bungalow, Ratnapura, into Post Office and quarters ; Range Forest Officers' quarters at Matugama, Mirigama, Karandeniya, Uragama, Deniyaya, and Ratnapura ; clerks' quarters, Kalutara, Negombo, Panadure, Matale, Mannar, Anuradhapura, Mihintale, Maradankadawala, Puttalam, Chilaw, Badulla, and Ratnapura.

*Medical Buildings.*—New infectious diseases hospital, Colombo ; three-storey block, annexe to Out-patients' Department and 2 additional wards, General Hospital ; Dental Institute, Colombo ; extensions to Angoda Lunatic Asylum ; Physiological block, new Medical College ; Operating Theatre, Lady Havelock Hospital ; new wards and quarters for Religious Sisters, Anti-Tuberculosis hospital, Ragama ; maternity ward, Ingiriya hospital ; new children's ward, Kandy hospital ; maternity wards at Madulkelle, Maturata, Deltota, Monaragala, and Undugoda hospitals ; new hospitals at Watawala, Kayts, Kili-nochchi, Anamaduwa, Giriulla, Madulsima, Tanamalwila, and Uggalkaltota ; additions to hospitals at Dolosbage, Uda Pussellawa, Dimbula, Galle, Puloly, Puttalam, Passara, Badulla, Kitulgala, and Kahawatta ; female ward and maternity annexe, Tangalla hospital ; female ward, Mihintale hospital ; improvements to Anuradhapura hospital ; 2 permanent wards, Buttala hospital ; store and dressing rooms, Mantivu Leper Asylum ; quarters for Medical Officer, Tirukovil dispensary, 2nd apothecary, Batticaloa hospital, apothecary, Hiripitiya dispensary, District Medical Officer, Koslanda hospital, and additional apothecary, Balangoda hospital ; dispensaries and apothecaries' quarters at Eriyagama, Puwarasankulam, Kunchikulam, Kemitigollowa, Ichchilampattai, Anamlundawa, Ratmalagahawewa, Uhana, Gomarankadawela, and Nivitigala.

*Police Buildings.*—Alterations and improvements to police station, Aturugiriya ; barracks for police constables, Matale and Galle ; improvements to Hatton police station ; improvements to quarters of Assistant Superintendent of Police, Tangalla ; quarters for Superintendent of Police, Kurunegala ; conversion of Chilaw jail into quarters for police ; new police station and barracks, Haputale ; quarters for Inspector of Police, Kegalla.

*Bridges.*—Construction of bridge at Andaluwa on the Urubokka-Mulatiyana road, Chilaw bridge, Arandara bridge, Kaluwamodera bridge, Idalawella bridge, Mannar bridge, and Halpatota bridge ; renewal of Welipana bridge, Anguruwatotalutgama road, bridge on 7th mile, Colombo-Avissawella road.

Rattota bridge, bridges on Kandy-Haragama-Kurunduoya road, and Puttalam road junction bridge; strengthening of Kirindi-oya bridge, bridges on the Haldummulla-Wellawaya road, and Badulla-oya bridge; reconstruction of bridge No. 275, Kallawella-Bellapitiya road, Kotugoda bridge, Ja-ela-Kotadeniya road, 2 bridges, 16th mile, Panadure-Nambapana road, bridge No. 310 on 30th mile, Kallawella-Bellapitiya road, Tientsin bridge, bridges on Duckwari-Cottaganga road, 6 bridges along Punnalai causeway, bridge on 1st mile, Kuliapitiya-Hettipola road, 3 bridges on the Narammala-Kuliapitiya road, bridge on 10th mile, Badulla-Batticaloa road, and Getahetta bridge; conversion of wooden bridges on Kalmunai-Akkaraipattu-Sagamam road and on Verugal-Kandy road into iron ones.

*Miscellaneous.*—Karaiyoor reclamation, Jaffna; flood discharge channels, Jaffna; China Bay development scheme; protection of bank, Toppu-Puttalam canal at Walahapitiya; Kurunegala waterworks.

## IRRIGATION.

Irrigation works in Ceylon are classified as —

- (a) Major works.
- (b) Village works.

Major works are all maintained and supervised by the staff of the Director of Irrigation from Government funds, and are liable to irrigation rates of some kind or another.

The financing of the construction of these works has been done originally by Government, but in the case of some works (which are termed “Aided Works”) the arrangement was that the actual cost of construction should be repaid to Government by instalments over a series of years, and the maintenance rate for these works is assessed quinquennially. In the case of the other major works termed “Perpetuity Rate Works,” the construction cost was unreservedly met by Government, and an irrigation rate in perpetuity imposed on the lands, which rate when imposed was intended to cover the cost of maintenance of the works and also repay something in the shape of interest on the construction costs.

Village works are in the charge of the Government Agents, who have a number of field staff officers of the Irrigation Department lent to them to assist them with the technical supervision; the maintenance as regards earthwork and clearing jungle and silt, &c., is done on a sharing system by the landholders under each work and regulated by special village works rules. The maintenance of the masonry works of village works is done from a Government vote to the Director of Irrigation, which is

distributed to the different Provinces, and the work carried out by the village tank staff (advised by the Divisional Irrigation Engineers), unless the work is of considerable magnitude, when it would be done by the Director's staff.

The bunds of village works have in most cases been constructed by villagers themselves supervised by Government Agents' staff under different forms of permit, in many cases the people being allowed land under the works in proportion to the earthwork done; sluices (whether masonry or pipes) are provided from Government votes, and also masonry spills where they exist.

Landowners under village works pay no irrigation rates. Occasionally arrangements are made by agreement between Government and the proprietors by which a village work becomes a major work or *vice versa*, but instances of this are not frequent.

Under the Irrigation Ordinance of 1917 the control of paddy cultivation under all classes of works is in the hands of Government Agents.

The total expenditure of the Department for the financial year 1926-1927 was Rs. 1,741,574·82, as compared with Rs. 1,730,006·41 for the previous year.

The usual work of maintenance was carried out during the year, and amongst the more important works constructed or in course of construction are—

*Karachchi Scheme.*—This scheme was further developed by cutting new distribution channels and completing and improving agricultural roads. The work on roads included construction of bridges and culverts.

*Nachchaduwa Scheme.*—The distribution channel system was improved. Increased activity was noticeable all over the scheme, and a considerable area of land is being cleared for development.

*Giant's Tank Scheme.*—The tank bund, inlet channel, and system of distribution channels for this extensive scheme were improved.

*Tabbowa Scheme.*—The left bank main sluice was completed as regards approach and pitching, and a spill regulator was constructed  $\frac{1}{4}$  mile down the channel.

*Diyaturai Anicut.*—Work commenced on this scheme was delayed somewhat by an epidemic of fever and unseasonal occurrence of minor floods.

*Walawe Left Bank Scheme.*—The sinking of the puddle trench, which has been delaying work on the main embankment, has now been completed. Satisfactory progress has been made on the inlet channel and intake sluice.

*Walawe Right Bank Scheme.*—The agricultural road from Mamadola to Walawe estate was completed and work started on the Hatagala-Etbatuwa road.

*Unnichchai Scheme.*—The upper portion of the stone protection of the water face of the bund was practically completed and work on the lower level is proceeding.

*Pandarakattu Anicut, Rugam Scheme.*—A start has been made and all sheet piling has been driven and the concrete apron is now complete. Concrete foundations of both left bank and right bank abutments are in place, and about 40 per cent. of the concrete work of the left bank abutment completed before river floods caused the abandonment of the season's operations.

*Verugal Anicut, Allai Scheme.*—Unanticipated floods in the early part of the year delayed work considerably, but later on good progress was made with concrete and earthwork.

*Village Works.*—Satisfactory progress has been made during the year on village works, the expenditure having been Rs. 107,073, of which Rs. 92,516 represents work on improvements and repairs to 133 village irrigation schemes.

*Surveys and Investigations.*—The principal surveys, investigations, or demarcations carried out were Walawe Left Bank Scheme, survey of the irrigable area and channel system; Karachchi Scheme, contour surveys of irrigable lands for setting out distributaries, field channels, and drainage lines and for blocking out land into suitable lots; Akathimurippu Scheme; Mahakandiyawewa surveys and Kathiraveli investigation surveys. In addition to these, a large number of surveys have been carried out in connection with improvements to village tanks and elas.

*New Buildings.*—The following new buildings were completed during the year :—

Bungalow for clerk at Bandarawela.  
 Bungalow for overseer at Uma-ela.  
 Bungalow for overseer at Soraborawewa.  
 Bungalow for overseer at Batugedera.  
 Bungalow for guardian at Maha Uswewa.  
 Bungalow for clerk at Kalmunai.  
 Office and store for Irrigation Engineer, Kalmunai.  
 Office for Divisional Irrigation Engineer at Batticaloa.  
 Bungalow for clerks at Killinochchi.  
 Bungalow for clerk at Anuradhapura.  
 Bungalow for Irrigation Engineer, Anuradhapura.  
 Bungalow for Irrigation Sub-Inspector at Habarana.  
 Bungalow for Irrigation Sub-Inspector at Talawa.  
 Bungalow for Irrigation Superintendent at Uyilankulam.  
 Bungalow for clerk at Tangalla.

Considerable constructional progress was made with the following buildings :—

Divisional Irrigation Engineer's Bungalow, Bandarawela.  
 Bungalows at Badulla for Irrigation Sub-Inspector.  
 Village Works, and Subdivisional Irrigation Officer.  
 Draughtsman's bungalow and Irrigation Engineer's Office.  
 Anuradhapura.

*General.*—The number of Crown irrigation works is 184, under which about 150,600 acres are at present irrigated.

There are approximately 2,789 village tanks and elas in operation and a further 1,560 under restoration.

Approximately 201,853 acres are cultivated for paddy under village irrigation works.

#### FLOOD PROTECTION.

The Irrigation Department is also responsible for the investigation and construction of flood protection schemes, and during the year has carried out investigation surveys as to the

possibility of protecting certain low-lying areas in the Southern and Western Provinces, and has also in hand the following work :—

*Colombo (North) Flood Scheme.*—The drainage tunnel at Mutwal was completed and placed in operation from August and has since reduced the level of water in Bloemendhal swamp by as much as 10 inches below mean sea level. By raising a portion of the railway bank west of Nagalagam street and by controlling the one remaining culvert under the railway by means of an automatic self-closing sluice the strengthening of the whole railway bank was completed. This scheme is now complete except for a few minor details.

*Colombo (South) Flood Scheme* has continued to function satisfactorily and maintenance operations only were undertaken.

*Kalu-oya-Muturajawela Flood Protection Scheme.*—The flood bund and sluice protecting the northern boundary of the low-lying area to be protected from Ja-ela to the Pamunugama road were constructed.

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## VIII.—Public Health.

**T**HERE are few countries in the world in which medical aid is more generously distributed by the State than Ceylon. There are 96 Government hospitals with provision for 7,747 beds.

In Colombo are situated a General Hospital with 839 beds, an Ophthalmic Hospital, a Lying-in Home, a hospital for women (Lady Havelock Hospital), a hospital for children (Lady Ridgeway Hospital), a Bacteriological Institute, a Pasteur Institute, and a Dental Institute. At Angoda, 6 miles from Colombo, there is a hospital for infectious diseases with 154 beds. There are special dispensaries at Kandy, Galle, Jaffna, and Batticaloa for the treatment of eye diseases.

As regards asylums, there is a Lunatic Asylum at Angoda, 6 miles from Colombo, and there are two Leper Asylums, one at Hendala in the Western Province and one at Mantivu in the Eastern Province. The Lunatic Asylum contained 1,752 inmates on December 31, 1927. The number treated in the Asylum during 1927 was 2,225 (1,471 males and 754 females). The number discharged was 254 males and 95 females. In the House of Observation 864 persons were dealt with, of whom 725 were discharged. The Leper Asylum at Hendala contained

591 persons at the end of the year. The total treated during 1927 was 729. The Asylum at Mantivu contained 141 lepers at the end of the year, the total treated during 1927 was 154.

There is a Home for Incurables at Colombo with 100 beds, which is administered by a Committee of Government officials and representatives of the public.

As regards the prevention of tuberculosis, in Colombo there is the King Edward VII. Anti-Tuberculosis Institute, at Kandana there is a sanatorium of 72 beds, and at Ragama there is a hospital for chronic cases.

In addition to Government hospitals, the owners of estates have provided 80 estate hospitals, which receive a rebate on the export duty on tea, rubber, coffee, cacao, and cardamoms.

In addition to the hospitals, there are 543 central and branch dispensaries provided by Government. There are 651 estate dispensaries, which receive free drugs from Government to the value of 50 cents per labourer per annum.

The campaign against anchylostomiasis was continued during the year and treatment was given in all estates and in the schools, hospitals, and dispensaries of every Province in the Island.

The chief centres of activity of the anti-malaria campaign were Anuradhapura, Trincomalee, Chilaw, and Kurunegala. At Trincomalee and Anuradhapura the measures that had been adopted in previous years were continued, viz., dealing with anopheline breeding places by means of oiling and Paris Green distribution, filling, and minor drainage. The success of these measures is shown by a reduction of the spleen rates, in the case of Anuradhapura from 41 per cent. in 1922 to 18·1 per cent. in 1927 and in the case of Trincomalee from 40 per cent. in 1922 to 9 per cent. in 1927. Work of a preliminary nature was carried out at Chilaw and Kurunegala.

Quinine was distributed very widely throughout the Island, not only through hospitals and dispensaries, but also through schools and headmen. The value of quinine distributed in the financial year October 1, 1926, to September 30, 1927, was Rs. 183,004·50.

The Sanitary Engineering Division started to function from August 15, 1927, and the following subjects were dealt with:—

*Malaria.*—Investigations and reports were made upon the feasibility of malaria drainage at Trincomalee, Kurunegala, Chilaw, and Anuradhapura.

*Waterworks.*—Investigations and reports were made upon existing or proposed waterworks in Ragama and Tangalla.

*General Drainage.*—Investigations and reports were made upon drainage in Weligama, Kurunegala, Chilaw, and Trincomalee. Investigations were made *re* drainage of Kalutara South.

### INFECTIOUS DISEASES.

*Plague.*—The following is a list of plague cases and deaths in Ceylon in 1927 :—

	Cases.	Deaths.
Western Province—		
Colombo town .. .. .	83	76*
Avissawella .. .. .	2	2
Attygalle, Hanwella .. .. .	1	1
Buthgamuwa .. .. .	1	1
North-Western Province—		
Hinduranpitiya in Wellawaya (removed to Infectious Diseases Hospital, Kurunegala)	1	1
Central Province—		
Bopitiya, Deltota .. .. .	1	1
Mulhakele .. .. .	1	1
Uduwella estate, Uduwella .. .. .	1	1
Kotabogoda, Kadugannawa .. .. .	1	1
Kandy .. .. .	25	21

\* Including 28 deaths at the Infectious Diseases Hospital.

### PLAGUE IN COLOMBO.

*Human Plague.*—There were 83 cases of human plague during 1927 with 76 deaths representing a case mortality of 91·6, as against 13 cases with 12 deaths in 1926. The larger number of cases during the year under review is believed to be due to the re-importation of fresh infection from abroad in September, 1926.

Of the 83 cases, 32 were septicaemic in type with 32 deaths representing a case mortality of 100 per cent. and 51 were bubonic in type with 44 deaths representing a case mortality of 86·3 per cent. There were seven recoveries. No less than 18 out of the 83 cases occurred in the Pettah ward, the chief grain centre of the city. Next came the adjoining ward of St. Paul's with 13 cases and Maradana South, another ward with a considerable grain trade, with 11 cases.

Fifty-six cases occurred during the first four months of the year, namely, 13 in January, 12 in February, 19 in March, and 12 in April; then there was a gradual decline in the number of cases each month.

Racially the Tamils were affected most, there being 34 cases amongst them, with the Coast Moors next with 21 cases, and the Sinhalese third with 17 cases.

As usual, more males than females were attacked. Out of the 83 cases, 72 were males and 11 females.



*Rat Plague.*—25,329 rats from all parts of the town were examined at the Municipal laboratory and 39 or 0·15 per cent. of them were found infected. The largest number of infected rats being found in the month of February.

Out of the 39 cases of rat plague no less than 21 were found from the Pettah ward, and of these 7 came from the Chalmers Granaries. Five cases were from the Customs premises, and the rest were from San Sebastian, St. Paul's, New Bazaar, and Maradana wards.

*Species of Rats.*—Of the 25,329 rats examined at the laboratory, 17,824 belonged to the species *R. Rattus*, with a percentage infection of 0·11; 6,244 belonged to the species *R. Norvegicus*, with a percentage infection of 0·27; 1,259 to the species *M. Musculus*, with a percentage infection of 0·16; and 2 were Bandicoots, with a percentage infection of nil.

*Rat Destruction.*—During the year altogether 148,280 were accounted for as follows :—

Number of rats trapped	..	..	145,732
Number of rats killed by fumigators	..	..	2,293
Number of rats found dead	..	..	255
Total			148,280

*Preventive Measures.*—The usual preventive measures were adopted, special attention being paid during the off season to the Cheopis infected areas mapped out by the City Microbiologist.

#### PLAGUE IN KANDY.

On telegraphic information received by the Acting Medical Officer of Health, Municipal Council, Kandy, on October 24, 1927, from the District Medical Officer, Deltota, that a boy named Abdul Cader, a resident of 78/79, Colombo street, had died of plague, immediate action was taken to segregate the contacts and the disinfection of the houses.

Subsequently, when information was received from Mulhalkele that one Hinniappu, another resident of 69, Colombo street, died suddenly, as one of the contacts of Abdul Cader developed plague in the segregation camp and as a Brahmin boy of the Kataragama Dewale died of plague, it was decided to adopt drastic measures to prevent the further spread of the disease by evacuation of a whole block of buildings and segregation of the contacts.

The area evacuated was bounded as follows :—On the north by Colombo street, east by Castle Hill street, west by Brownrigg street, and south by Ward street.

A tagaram fence was put round this area, as it was found very effective in the last outbreak of plague in 1920.

There were no other cases of plague in this block, but the next case of plague was in Getambe, 3 miles away from the infected area. On further inquiries it was found that the boutique in Colombo street had had dealings with the boutique in Getambe. Possibly some infected goods might have been taken to this boutique from the Colombo street boutique, where the first case occurred. This area was responsible for 12 cases of plague, and the infection in every case was traced to the boutique in Getambe.

There was a lull from November 13 to 23, when a case occurred, emanating from the Kandy Club. Since then there have been further cases, mostly emanating from Castle Hill street and Colombo street. The first case of plague was reported on October 24, 1927, and the last case for the year was reported on December 23. In all there were 23 cases of bubonic plague, 2 cases of septicaemic plague, and 1 suspected case of plague in the person of a Muslim woman, who died suddenly, and no post-mortem was held as she was a Muslim.

*Cholera.*—The following is a list of cholera cases and deaths in Ceylon in 1927 :—

			Cases.		Deaths.
Northern Province—					
Achchuvely	..	..	1	..	1
Karativu ..	..	..	2	..	2
Province of Uva—					
Dyraba estate, Welimada ..	..	..	1	..	1
Koslanda estate, Koslanda	..	..	3	..	1
Iriwandumpolu	..	..	4	..	1
Total	..	..	11		6

During the preceeding year there were 56 cases of cholera and 47 deaths.

*Smallpox.*—The following is a list of smallpox cases and deaths in Ceylon in 1927 :—

			Cases.		Deaths
Western Province—					
Colombo town	..	..	2	..	1
Colombo Fort	..	..	7	..	2
Southern Province—					
Galle port	..	..	1	..	—
Central Province—					
Nuwara Eliya	..	..	2	..	—
Bandarapola Group, Matale	..	..	1	..	—
Kotagaloluwa, Gampola	..	..	12	..	2
Yarrow estate, Pussellawa	..	..	1	..	—
North-Western Province—					
Kurunegala	..	..	1	..	—
Total	..	..	27		5

During the preceeding year there were 65 cases of smallpox with 4 deaths.

## VITAL STATISTICS.

*Population.*—The estimated population of Ceylon on December 31, 1927, was 5,288,792 persons, as against 5,124,900 at the end of 1926—an increase during the year of 163,802 persons, representing a rate of 3·2 per cent. The increase was made up of an excess of 92,463 births over deaths, and of 71,339 more arrivals than departures. The estimated population which at the end of the year stood at a little over five millions and a quarter, has increased by nearly 800,000, or to the extent of 17·5 per cent., since the last Census was taken.

*Migration.*—During the year under review 303,167 persons arrived in Ceylon and 231,828 persons left her shores, the number in each case being higher than in any year since 1911. The migration is mainly from India; and the estate labourers from that country numbered among the arrivals 159,399 and the departures 87,481. The miscellaneous passengers to and from India amounted to 120,566 arrivals and 120,078 departures during the year. 23,202 persons arrived in the Island from other countries, and 24,269 persons left for other countries. The excess in arrivals this year, as in the past, is chiefly due to estate labour, who added 71,918 persons to the Island population. The incoming and the outgoing populations from other sources have very nearly balanced.

*Race Constitution of the Population.*—The population of the principal races as estimated to the end of 1927, and the proportion of each race per 1,000 of the total population, are as follows :—

Race.	Estimated Population on December 31, 1927.	Proportion of each Race per 1,000 of the Total Population
Europeans .. ..	11,447	2·2
Burghers and Eurasians .. ..	32,561	6·1
Sinhalese .. ..	3,375,655	638·3
Tamils .. ..	1,174,020	222·0
Moors .. ..	301,823	57·0
Malays .. ..	15,098	2·8
Veddas .. ..	4,518	·9
Others .. ..	22,000	4·2
Excess of immigrants over emigrants (exclusive of Europeans) since March 18, 1921 .. ..	351,670	66·5

*Marriages.*—The number of general and Kandyan marriages registered during the year was 30,566, of which 23,676 were under the General Marriages Ordinance and 6,890 under the Kandyan. The total number is 1,810 more than in the preceding year, and is the second highest on record since 1900, the highest number registered being 31,331 in 1925. The number of persons

married corresponded to a rate of 12·6 per 1,000 of the estimated population, as against 12·2 in the preceding year and 11·2 the average for the ten years 1917–1926.

The number of marriages registered among Muslims was 960. This is an improvement on the average number (864) of the past ten years, but a fall compared with the number (996) registered in 1926.

Of the total number of marriages registered in the Island, 1,125 were those in which one or both the parties were residents of the principal towns. The number, which was 520 more than in the preceding year, included 4,346 general marriages, 52 Kandyan, and 727 Muslim. It will be observed that out of the 1,060 Muslim marriages registered in the whole Island, no fewer than 727 were in urban areas, indicating that Muslims in the towns are more alive to registration than their brethren in the country.

*Divorces.*—Divorces under the General Marriages Ordinance are granted by the District Courts, and those under the Kandyan by the Government Agents and their Assistants. The divorces granted in 1927 under the General Marriages Ordinance numbered 75, or 38 less than in 1926. The Kandyan divorces, on the other hand, numbered 705 and showed a noticeable increase on the number (526) in the preceding year. The facilities under the Kandyan law for obtaining a divorce account in no small measure for this preponderance of Kandyan divorces as compared with the general. No record of Muslim divorces is available.

*Births.*—The number of births registered during the year was 205,470 (104,951 males and 100,519 females), and is the second highest on record, the highest number registered in any year being 206,888 in 1926. The birth rate per 1,000 of the estimated population was 39·5, as against 41·0 in the preceding year and 38·9 the average for the ten years 1917–1926. The highest birth rate during the year was 50·9 per 1,000 in the North-Central Province, which in 1926 ranked seventh in order, with a rate of 43·0. The Province of Uva, as in the previous year, retained the second place, but with a slightly higher rate (50·7) than in 1926. The Eastern Province with a rate of 48·7 and the North-Western with a rate of 44·8 also recorded increases during the year. In the other five Provinces the birth rates were lower than in 1926, and ranged from 46·6 in the Central to 34·7 in the Western. The rise, as compared with the previous year, of 7·9 per 1,000 in the birth-rate of North-Central Province and the fall of 4·6 per 1,000 in that of the Central Province were pronounced features in the birth statistics of the Provinces in the year under review.

The number of births on estates scheduled under the Medical Wants Ordinance was 26,543, of which 13,408 were of males and 13,135 of females. The total number is 3,731 less than that registered in 1926, in which year, on the estates as elsewhere in the Island, the number of births registered constituted a record. The number of births on estates was equivalent to nearly 13 per cent. of the total births registered in the Island.

In the 33 proclaimed towns in the Island the number of births registered amounted to 21,775, of which 11,143 were of males and 10,632 of females. The number in the previous year was 21,830. The urban births this year, which formed nearly 11 per cent. of the total births, corresponded to a rate of 34·2 per 1,000 of the estimated population of the towns, as against 34·6 in 1926 and 30·7 the average for the decade 1917-1926.

In the city of Colombo the births registered numbered 8,491. There was an increase of 376 as compared with the previous year. The birth-rate was 32·4, as against 31·3 in 1926 and 26·9 the average for the past decade. The proportion of male children whose births were registered in the Island in 1927 to every 1,000 such females was 1,044, as against 1,035 in 1926.

*Deaths.*—The deaths of 113,007 persons (56,784 males and 56,223 females) were registered in the Island in 1927. The number, which is the lowest on record since 1916, corresponded to a rate of 21·7 per 1,000 of the estimated population. There has been no year since 1884 in which the general mortality rate of this Island was so satisfactory. This year's rate shows an improvement of 3·0 per mille on the preceding year and of 7·1 on the average of the past ten years. The freedom from any serious epidemics and the increasing activity manifested in the sanitation of the country may be said to be largely responsible for the comparatively low death rate recorded in the Island in the year under review. The improvement in the general death rate of the Island has been shared by all the Provinces, except the Province of Sabaragamuwa, which recorded the same rate as in the previous year. As usual, the North-Central Province recorded the highest rate, viz., 32·9, and the Western Province the lowest, viz., 18·9. The death rate in the North-Central Province shows, however, a considerable improvement on the preceding year's rate (41·4) and on the average of the past ten years. Equally marked is the improvement in the North-Western Province, whose rate this year was 22·1, as against 31·4 in 1926. The Southern Province and the Province of Sabaragamuwa have exchanged places—the former, which in point of health was third in order in 1926, has gained one place higher with an improved rate of 21·1, while the latter which was second in 1926, goes one place lower down. The fourth place is

taken by the North-Western Province, which in the previous year was sixth in order with a much higher rate. The Northern Province and the Central Province, which occupied the fourth and the fifth places in 1926, take the fifth and the sixth places, respectively, this year. The last three places are held by the Eastern Province, the Province of Uva, and the North-Central Province, as in the previous year. As already stated, all the Provinces, with one exception, had improved rates.

The number of deaths on estates scheduled under the Medical Wants Ordinance amounted in the year under review to 21,239, of which 10,188 were of males and 11,051 of females. This was 19 per cent. of the total deaths registered in the Island during the year. The total number is 505 more than that of the preceding year and 543 more than the average number of the past decade. The small increase in the number of estate deaths during the year notwithstanding a decrease for the whole Island, need not be taken as representing unfavourable conditions on the estates. It is mainly ascribable to the large addition of population to labour force, which naturally affected the number of deaths on estates.

In the 33 proclaimed towns there were registered during the year 19,280 deaths, of which 10,228 were of males and 9,052 of females. The deaths of residents only numbered 14,511, which corresponded to a standardized rate of 24·7 per 1,000, as against 26·7 in the preceding year and 29·7 the average for the past ten years. In the city of Colombo, which is by far the largest and most important, 7,217 deaths were registered, of which 5,640 were of residents. The standardized death rate calculated on the deaths of residents was equal to 24·8 per 1,000, as against 26·4 in the preceding year and 28·9 the average for the past ten years.

*Infant Mortality.*—The deaths of infants under 1 year of age amounted in the year under review to 32,961 and represented 29 per cent. of the total deaths. In the previous year too the percentage of infant deaths to the total number was 29. The mortality rate of infants was equivalent to 160 per 1,000 births registered during the year, and showed an appreciable improvement over the previous year's rate (174) and the average (189) of the past decade. There has been a gradual improvement in the infant mortality rate of the Island during the past few years, and the rate recorded in 1927 is the lowest since 1898. This is a proud record for this country, and speaks well of the general health of the inhabitants and their economic welfare. The steady and cumulative effect of the various methods employed to save infant lives and the growing enlightenment, first of the mother, and secondly of the public, in matters relating to infant

care and management have no doubt been the main factors in bringing this improved state of affairs. It is hoped that future years will show still better results.

On the estates the number of children who died before completing the first year was 6,340, and was 131 fewer than in the preceding year. The percentage of infant deaths to the total number of deaths on estates during the year was 30, as against 31 in the preceding year. The mortality rate of infants on estates was equal to 239 per 1,000 births, and compares somewhat unfavourably with the previous year's rate, which was only 214, and the average rate of the past ten year's, viz., 224. It is regrettable that the improvement recorded this year in the infant mortality rate of the Island as a whole has not been shared by the estates. In the 33 principal towns the deaths of 4,159 children under 1 year were registered, corresponding to a rate of 191 per 1,000 births. The improvement noticed in the Island rate is also evidenced in the urban areas, for the rate is 17 per 1,000 less than in 1926 and 46 per 1,000 less than the average of the ten years 1917-1926.

In the city of Colombo the rate was 187 per 1,000 births, as against 204 in the preceding year and 244 the average for the past ten years.

*Causes of Death.*—The deaths registered in 1927 from most of the principal causes were less than in 1926. Under pyrexia, a term denoting fever not otherwise defined, a very large number of deaths are usually classified. During the year under review there were attributed to this cause 13,502 deaths, representing 12 per cent. of the total deaths. Another frequent cause of mortality is infantile convulsions, which this year has outstripped even pyrexia and claimed 13,687 victims, or another 12 per cent. of the total. The rates per million of the estimated population for 1926 and 1927 from some of the principal causes are subjoined:—

Causes.	Rate per Million of the Estimated Population	
	1926.	1927.
Infantile convulsions .. ..	2,971	2,630
Pyrexia .. ..	3 526	2 595
Diarrhoea and enteritis .. ..	1,963	1,597
Pneumonia .. ..	1,511	1,538
Phthisis .. ..	656	644
Dysentery .. ..	696	604
Premature birth and congenital defects .. ..	446	410
Anchylostomiasis .. ..	420	373
Influenza .. ..	315	338
Puerperal septicaemia .. ..	304	256
Malaria and malarial cachexia .. ..	322	255
Bronchitis .. ..	212	211
Cancer .. ..	101	104
Enteric fever .. ..	108	98

*Smallpox.*—Five deaths (4 of males and 1 of a female) from smallpox as against 4 in 1926 were registered during the year. Of the number, 3 were registered in Kandy District and 2 in Colombo.

*Influenza.*—The number of deaths registered from influenza in 1927 was 1,756 (911 males and 845 females). There was a slight increase during the year as compared with the three preceding years. More deaths were registered in the third quarter of the year than in any of the other three quarters, similar to the experience in 1926.

*Pneumonia.*—The total number of deaths registered from pneumonia in its various forms was 8,004 (4,226 males and 3,778 females). In the case of pneumonia too there was an increase in 1927 as compared with the years 1925 and 1926. The increase was more in evidence in the latter than in the earlier half of the year. The figures of the mortality from influenza and pneumonia seem to suggest a slight influenzal wave in the middle and latter parts of the year.

*Cholera.*—Except for 3 deaths, 2 of which were registered in Badulla and 1 in Jaffna, the country was immune from cholera during the year. In 1926 and 1925 there were 54 and 188 deaths respectively.

*Plague.*—100 deaths from plague were registered in 1927 as against only 16 in 1926 and 64 in 1925. Out of the deaths in Colombo District, 47 were registered within Colombo town and 29 outside the town limits. These latter were mainly at the Infectious Diseases Hospital at Angoda, whence patients from the city are removed for segregation and treatment. Colombo may be said to have been practically plague-free in the last three months of the year, the majority of the deaths having occurred there earlier in the year, particularly between the months January and May. An outbreak in October of the year was responsible for 22 deaths in Kandy. How the infection was carried to Kandy, which was free from plague for the past few years, is not definitely ascertainable yet. The surmise is that rats were infected first before any human cases of plague were discovered. One death from plague in Kurunegala and another in Anuradhapura were also registered.

*The Puerperal State.*—The deaths resulting from childbirth are comparatively numerous in this country. During the year as many as 3,595 or 3·2 per cent. of the total deaths were due to diseases consequent on child birth, as against 3,951 in 1926. The death rate of parturient women in the year under review was equivalent to 17 per 1,000 births, though high, the rate shows a fall of 2 per 1,000 as compared with the rate of the previous year.



*Suicide.*—263 deaths during the year were ascribed to suicide. The number, which is 19 less than in 1926, consisted of 182 men and 81 women. The rate per million persons was 51, as against 56 in the preceding year. The commonest methods of self-destruction employed in this country are hanging and drowning.

*Homicide.*—The number of deaths attributed to homicide in 1927 was 206, of which 157 were of males and 49 of females, and corresponded to a rate of 40 per million of the estimated population. In the previous year the number of homicide cases was 280. Cutting or piercing instruments (mainly the knife) are the weapons commonly employed. Firearms are also used, but less frequently.

*Execution.*—During the year 39 men underwent the extreme penalty of the law, as against 44 in the previous year and 32 in 1925.

*Accidents and other External Violence.*—There were 2,024 deaths (1,444 of males and 580 of females) registered in 1927 under this heading as against 1,970 in 1926. The number registered in 1927 includes among others 468 deaths from drowning, 381 from falls from trees, 235 from snake bite, and 217 from burns. The deaths which resulted from motor accidents numbered 110, and those from railway accidents 60.

*Causes of Death on Estates.*—Out of the 21,239 deaths registered on scheduled estates during the year, 3,225 or 15 per cent. were attributed to debility of children under 1 year, which usually levies a heavy toll on estates. Pneumonia, also a prolific cause of death on estates, caused 2,979 deaths, or 669 more than in the previous year; and dysentery 2,023, as against 2,132 in 1926. There were 1,773 deaths from diarrhoea and enteritis, 1,753 from infantile convulsions, and 1,321 from anchylostomiasis, as against 1,892, 1,739, and 1,474, respectively, in the preceding year. 931 deaths were due to premature birth and congenital defects, as against 908 in 1926, and 485 to bronchitis. Deaths from phthisis numbered 425, 37 more than in 1926, and those from influenza increased to 421, from 257 in 1926. Malaria, which is less frequent on estates, was ascribed as the cause of death in 297 cases, a slight increase over the number in 1926. 43 cases of suicide and 8 of homicide were registered on estates, an increase of 9 and a decrease of 6, respectively, as compared with the figures for 1926. Three estate labourers were executed during the year.

*Causes of Death in Towns.*—The number of deaths registered in the 33 principal towns in 1927 was 19,280 of which 2,788 or 14 per cent. were due to pneumonia, which in the previous year levied 2,828 lives. Debility of infants claimed 1,429 lives, 76

more than in 1926. Convulsions caused 1,292 deaths, and the number was 307 less than in 1926. Tuberculosis of lungs, which was ascribed as the cause of death in 1,169 cases, was 90 less than the number in 1926. Diarrhoea was assigned as the cause in 741 deaths and enteritis in 694, the number in each case being less than in 1926. Dysentery caused 677 deaths, as against 744 in 1926, and anchylostomiasis 632 and Bright's disease and nephritis 607. Deaths due to malaria numbered 634, and those due to influenza 330. Enteric fever claimed 338 lives, or 71 less than in 1926. Bronchitis and puerperal septicaemia was each assigned as the cause of death in 364 and 341 cases. Cancer accounted for 187 deaths, 8 more than the number registered in the previous year. There were no deaths from smallpox or cholera, but from plague there were 69 deaths and from chicken-pox 1 death. Accidents resulted in 454 deaths, and deaths from homicide and suicide numbered 84 and 53, respectively. In the previous year there were 450 deaths from accidents, 92 from homicide, and 58 from suicide.

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## IX.—Education.

*Schools.*—The total number of schools in the Island in 1927 was 4,495; of these, 1,268 were Government schools, 2,222 were assisted schools, and 1,005 were unaided schools. There was an increase during the year of 43 Government schools and 70 assisted schools.

*Pupils.*—The total number of pupils on the roll was 195,649 in Government schools and 293,562 in assisted schools, showing an increase of 22,516 over the number of pupils attending schools in 1926. The total number of pupils attending Ceylon schools in 1927 was approximately 58 per cent. of the number of children of school-going age at the last Census in 1921.

*Teachers.*—The number of teachers employed during the year was 4,173 in Government schools and 10,125 in assisted schools, showing an increase of 766 teachers over the number employed in 1926 in both Government and assisted schools.

*Expenditure.*—The total expenditure of the Department for the period October 1, 1926, to September 30, 1927, was Rs. 8,242,723·89. The nett cost to Government of subsidizing education in the Island during the year, after deducting sums credited to revenue on account of school fees, &c., was Rs. 8,040,798·23.

## ENGLISH EDUCATION.

There were 255 English schools in 1927 as compared with 247 in 1926, of which 238 were assisted schools and 17 were Government schools. These schools were attended by 39,733 boys and 11,548 girls, showing an increase in the attendance of boys over that in 1926 by 2,222 and a decrease in the attendance of girls by 156.

The classification of the 238 assisted schools for 1927 as compared with that for 1926 was as follows :—

			1926.		1927.
Secondary Schools	..	..	44	..	46
Higher Grade Schools	..	..	25	..	35
Elementary Schools	..	..	148	..	145
Night Schools	..	..	13	..	12

The Royal College, with an average attendance during the year of 546, is the only secondary Government school in the Island under the management of the Education Department. Such changes are made in the curriculum of the school as are necessary to conform to the requirements of secondary education in the Colony.

With the exception of a few schools, the assisted English schools continue to have sufficient accommodation for their pupils, while steady improvement in these schools has also been made during the year in school furniture. Much, however, remains to be done in the matter of school equipment. Such equipment is satisfactory only in the case of a few large secondary schools. While general improvement has been reported in the provision and use of class libraries, there continues to be, in the majority of schools, a general lack of teaching apparatus and of facilities for the teacher to keep himself in touch with educational progress.

The general standard of work in English schools is greatly handicapped by the restricted character of the curriculum, which is not yet based on the needs of the pupils or the economic conditions of the Island. New syllabuses for primary and elementary schools will be introduced in 1928, which, it is hoped, will enable such schools to give a practical bias to the education given to the pupil above the age of 11 or 12.

In 1926 the number of candidates who presented themselves for the Cambridge Junior and School Certificate Examinations and the results obtained were—

		Candidates.	Honours.	Other Passes.
Senior School Certificate Examination	1,626	..	72	.. 265
Junior ..	..	1,291	.. 57	.. 453

338 candidates from Ceylon presented themselves for the London Matriculation Examination in 1927, of whom 67 passed.

The following is a statement showing the number of candidates who presented themselves for the various other examinations during the year 1927 and the number of them who secured passes :—

Examination.		Number of Candidates.	Number of Passes.
Inter-Mediate (Arts)	..	134	32
Inter-Mediate (Science)	..	70	14
Inter-Science (Economics)	..	1	1
Inter-Mediate (Laws)	..	3	—
Inter-Commerce	..	2	1
B.Sc. General ..	..	35	14
B.Sc. Special ..	..	3	2
LL.B. ..	..	1	1
B.A. Examination	..	32	12
B.A. (Honours)	..	6	3

Government continues to offer encouragement in the form of scholarships, including five yearly scholarships of the value of £300 per annum each, with free passage and outfit allowance of £50, tenable at one of the Universities in the United Kingdom. It was also decided during the year to offer, for the first time, two scholarships for competition annually among the children of garrison ranks who are entitled to free education in the British Army School in Ceylon. These scholarships will be of the value of Rs. 240 per annum each, and will be awarded after examination, one to a boy and the other to a girl.

#### VERNACULAR EDUCATION.

In 1927 there were 1,199 Government vernacular and Anglo-vernacular schools with an attendance of 132,370 boys and 59,862 girls. There were also 1,918 assisted schools with an attendance of 142,416 boys and 94,581 girls. Of these, 304 were estate schools, as compared with 294 in 1926. A number of new estate school buildings erected in 1927 will be registered in 1928. The 2 Estate School Inspectors employed by the Department visited over 650 estates during the year and travelled more than 9,000 miles by road and path.

The school at Mount Lavinia for the deaf and blind, started in 1912, continues to do good work. During the year 25 new pupils were admitted, bringing the total number of deaf and blind in the school up to 213.

During the year several new vernacular school buildings were constructed and existing buildings extended. Eighteen mixed schools were separated into boys' schools and girls' schools. The permanent accommodation provided, however,

has not kept pace with the increasing attendance, temporary buildings having had to be erected in many cases to relieve the congestion.

A recent undertaking has been the education of Vedda children in the Eastern Province. The Veddas seem greatly to appreciate this attempt to extend to their children the benefits of education, but the difficulties that lie in the way of furthering this object are many, *e.g.*, the undeveloped nature of the country, the absence of proper roads, the situation of the schools in the midst of jungles infested with dangerous wild animals, and the great distances that separate populous villages.

As regards estate schools, a type plan of an inexpensive but satisfactory building was prepared during the year and copies of it distributed. The general standard of buildings is satisfactory, but an effort is being made to have all schools brought up to the standard of the type plan. A number of temporary buildings still exist, but they are gradually being replaced by permanent ones.

The system of paying grants in respect of Estate schools was revised during the year, the most important item being the abolition of the restriction of any one grant to a maximum of Rs. 400. Grants are now paid on a basis of attendance and results combined, and under the new rules it should be possible for a keen Superintendent to run an estate school without any expense whatsoever to the estate.

#### EDUCATION DISTRICT COMMITTEES.

Of the 31 Education District Committees in existence which have been constituted under the Education Ordinance, 13 have unofficial Chairmen. The members nominated to Committees in 1925 on the first establishment of these Committees vacated their seats at the end of the year, their appointment being for a term of three years.

Government decided during the year that funds at the disposal of the Committees should be used for the benefit of Government schools only, all grants to assisted schools being made as hitherto by the Education Department, thus preventing overlapping. The grant voted by the Legislature for the year for allocation to the various Committees was Rs. 600,000, Rs. 100,000 being voted for repairs to existing schools and Rs. 500,000 for the establishment of new Government schools.

Though subject to a very general control by the Department, Education District Committees are practically self-contained, and overhead charges vary considerably.

## TRAINING OF TEACHERS.

The Government Training College, consisting of four Departments—English (men and women), English Kindergarten (women), Sinhalese (men) and Sinhalese (women)—supplies trained teachers for Government and Assisted English Schools and Government Vernacular Schools.

The number of students entered for each of the different courses in the English Department at the beginning of the year was as follows :—

1st Year men ..	..	18	2nd Year men ..	..	18
1st Year women ..	..	11	2nd Year women ..	..	12
1st Year kindergarten ..	..	8	2nd Year kindergarten ..	..	12

Seventy-one students—34 men and 37 women—were in residence during the year.

The 20 students who were admitted in January, 1926, to the Gampaha Training School completed their course in December, 1927. Eighteen of these have already been appointed Assistant Masters in Government English and Anglo-Vernacular Schools, the other two having secured places in Assisted Schools. During the year 9 of the 10 students who sat for the 3rd Class Vernacular Teachers' Certificate Examination obtained certificates.

There were 60 students at the beginning of the year at the Jaffna Training School. Of the 20 second year students who completed their course in September, 17 were awarded 2nd class certificates and 2 provisional 2nd class certificates. 135 candidates presented themselves for the entrance examination held in August, 1927. Thirty-five of these were selected for the First Year Class, bringing the total number of students in training at this school up to 75.

## INDUSTRIAL SCHOOLS.

In 1927 there were 108 Industrial Schools in the Island, of which the most important are the Maggona Certified Industrial School managed by the Roman Catholic Mission, and the Wellawatta Industrial School under the management of the Wesleyan Mission. The former institution is specially meant for the reception of juvenile offenders, the Government contributing towards the cost of their maintenance at the Reformatory. At the beginning of the year, there were 242 juvenile offenders at the Reformatory and 111 were admitted in the course of the year, while 87 were discharged during the year having served their full terms of detention.

Subjoined is a statement showing some of the industries taught, with the number of schools engaged in giving instruction in them noted against each :—

Name of Industry.	Number of Schools.
Carpentry ..	31 Government schools and 8 Assisted schools
Lacquer Work ..	3 Government schools
Rattan Work ..	2 Government schools and 1 Assisted school
Basket-making ..	47 schools—as a part-time subject
Printing ..	7 Assisted schools
Blacksmith's Work and Fitting ..	2 Assisted schools
Weaving ..	14 Government, 10 Assisted, and a number of other schools

There are two Inspectors employed by the Department in connection with this branch of education, one of whom has charge of Weaving Schools and the other the Carpentry and other Industrial schools.

An effort was made during the year to encourage the use of Co-operative Societies among the students of the Weaving Schools in order to enable them to start weaving in their homes after their course of training.

#### AGRICULTURAL INSTRUCTION IN SCHOOLS.

Elementary agricultural instruction continues to be given by a scheme of school gardens conducted in connection with schools under the supervision of the Department of Agriculture.

There were at the end of the year 748 gardens attached to Government schools and 99 gardens attached to Assisted schools, of which 57 of the former and 7 of the latter were registered during the year. With a view to hastening the registration of these school gardens, the Department of Agriculture allocated funds for supplying implements to 26 of the 57 Government school gardens registered during the year, the rest being provided from funds placed at the disposal of the Department by the various Education District Committees.

To secure more efficient teaching of nature knowledge and agriculture in the Vernacular schools for Vernacular Agricultural Instructors (who had been teachers before) were given a special training at the Farm School, Peradeniya, and appointed to various centres. In each of the areas served by these centres 8 schools were selected within easy reach of one another, and the instructors visited and conducted both outdoor work in the school gardens and indoor lessons with the classes as provided for in the syllabus.

Most of the school gardens have done very good work during the year, the work done at schools where there are agriculturally trained teachers showing a marked superiority.

Some enterprising Estate Superintendents have also opened gardens attached to their Estate schools, and have had them registered by the Department of Agriculture.

### TECHNICAL.

*Government Technical Schools, Colombo.*—The work of the schools is increasing rapidly, and it has been found necessary to provide additional staff in order to carry on satisfactorily the work in hand. A special class in Electricity and Magnetism and Practical Mathematics was started during the year.

*The Jaffna Technical Schools* opened in 1921 were closed during the year, and the buildings were used by the students of the Jaffna Training School.

### MEDICAL INSPECTION OF SCHOOLS.

There are four Medical Officers, including a lady Doctor, at present engaged in the medical inspection of children attending Ceylon schools. This work was started early in 1919 with a single Medical Officer appointed to visit schools and examine children, treatment clinics being opened for minor ailments. Work, in the first instance, was confined to schools in Colombo, but was later extended throughout the Island with Medical Officers stationed also at Kandy and Jaffna.

From the very commencement the schools were wholeheartedly in support of pupils being medically examined; and the pupils themselves, after the first medical examination, began to welcome it. The only difficulty experienced was in the response of parents: defects or disabilities were noted in their children of which they took no notice because they had never come under their personal observation and apparently did no harm; or the cost of ameliorative measures was prohibitive; or, again, the prejudice against modern and scientific methods of treatment was deep rooted.

These obstacles, however, are being gradually surmounted, and work during the year progressed satisfactorily, including the work of "following up" children by visits to their homes and interviews with their parents.

Provision was made during the year, for the first time, for the supply of glasses at Government expense to children with defective eye-sight whose parents cannot afford the expense of purchasing glasses, the concession being restricted for the present to those children whose probable occupations after leaving school will necessitate the use of glasses.



### PHYSICAL TRAINING AND BOXING IN SCHOOLS.

Steady progress in physical training was maintained during the year. Most of the schools introduced the Syllabus of Physical Training by the Board of Education, England. A suitable text-book in the vernaculars, the want of which had hitherto been a drawback in Vernacular schools, was supplied towards the end of the year by the translation of the above-mentioned syllabus into Sinhalese and Tamil.

During the year four Vernacular Teachers' Physical Training Classes were held, and nearly 400 teachers were trained according to the new system of physical training. There was also held a Physical Training Class for female students. It is proposed to introduce physical training gradually into girls' Vernacular schools.

Boxing was introduced into schools in the latter part of 1925, and has made fair progress. During the year there were 20 schools where boxing was taught and over 800 pupils received lessons. There are two Boxing Instructors employed by the Department.

Boxing classes in advanced schools are conducted by the Boxing Instructor and teachers competent to teach boxing. With a view to raising the standard of boxing among teachers, a Saturday Class was commenced with Veyangoda, in the Colombo District, as centre. The teachers and monitors of the schools within the area served by this centre receive their training at these Saturday Classes. Teachers thus qualified will finally be allowed to conduct boxing classes, their schools being inspected by the Instructor periodically.

### THE UNIVERSITY COLLEGE.

*Numbers.*—The number of students on the roll in July, 1927, the beginning of the academic year 1927–28, was 279, including 17 women students. The figures for 1921–26 were as follows :—

1921	..	166		1924	..	262
1922	..	217		1925	..	256
1923	..	262		1926	.	313

*Courses.*—The College offers instruction in Latin, Greek, Sanskrit, Pali, English, Sinhalese, Tamil, French, German, Logic, Philosophy, History, Geography, Economics, Pure Mathematics, applied Mathematics, Physics, Chemistry, Botany, and Zoology.

Honours courses are provided in Classics, English, History, Mathematics, Chemistry, Botany, and Zoology.

The College course is normally one of three years. At the end of the first year students take the (External) Intermediate

Arts, Science, and Economics examinations of the University of London conducted in Ceylon. At the end of the third year they take the final examinations for the B.A. (Pass), B.A. (Honours), B.Sc. (General), B.Sc. (Special), and B.Sc. (Economics) Degrees of the same University.

Students who intend to join the medical profession are given one year's course of instruction in Physics, Chemistry, and General Biology, at the end of which they take either the First M.B. Examination of the University of London or the Pre-Registration Examination of the Ceylon Medical College, or both.

*Graduates.*—On the results of the examinations held in June, 1927, the following numbers qualified for Final Degrees of the University of London :—

B.A. (Pass) : Three (including one woman).

B.A. (Honours in Classics) : One (Second Class).

B.A. (Honours in Mathematics) : One (First Class).

B.Sc. (General) : Thirteen (including four who obtained Second Class Honours).

B.Sc. (Special—Mathematics) : Two (one First Class Honours and one Second Class Honours).

The total number of graduates from the University College from the time of its inception in 1921 is 117.

*Additions to the Staff.*—A Lecturer in Physics, a Lecturer in History, and an Additional Lecturer in Oriental Languages were added to the staff, and the officers appointed assumed duties during the year. Since the resignation of the Professor of Classics and Philosophy, it has been decided to separate the Department of Philosophy from that of Classics. The post of Professor of Classics is at present vacant. It will be necessary to add a Lecturer in Philosophy to the staff. The sanctioned post of Additional Lecturer in Zoology remains vacant.

*Prospectus.*—The College Prospectus was revised and issued in June, 1927.

*The Library.*—The library has continued to expand, and more accommodation is required.

*Hostels.*—Most of the students not living with their parents or relations are residing in four hostels affiliated to the College and subject to the College rules and regulations. These hostels are administered by extra-university bodies and are subsidized by the Government.

*Students' Activities.*—The usual activities of the College Union Society have been maintained. Athletics, cricket, rugger, soccer, hockey, tennis, and boxing find their proper place in the

field of sports. The Union has a Debating Society. Besides the Union Society, to which all undergraduate members of the College belong, there are the following societies : English Study Circle, Dramatic and Musical Society, Sinhalese Society, Tamil Society, Biological Society, Physical and Chemical Society.

*University College Council.*—This Council, which consists of twenty members nominated by His Excellency the Governor, continue to advise the Principal of the College in matters relating to the administration of the College, and the preparation for its conversion into a University.

*The University Project.*—Progress in the steps which were being taken towards the inauguration of the University has been checked owing to a renewed controversy as to the most suitable location for a University in Ceylon.

#### THE CEYLON MEDICAL COLLEGE.

The Ceylon Medical College provides the complete course of instruction required for the practice of Modern Medicine, Surgery, and Midwifery. Including the course of preliminary or pre-registration work in Physics, Chemistry, and Biology, which is provided by arrangement at the University College, Colombo, the whole course takes six years. At the end the Diploma in Medicine, Surgery, and Midwifery is conferred and under the designation of L.M.S. (Ceylon) is recognized by the General Medical Council of the United Kingdom and entitles the holder to be registered and to practise his profession in Great Britain and throughout the British Empire.

In addition to the complete Medical Curriculum the College provides a course of instruction for a minor grade of Medical Practitioners known as Apothecaries. These receive a two years' course of instruction in Anatomy, Physiology, Chemistry, Pharmacy, Pharmacology and Dispensing, Elementary Medicine, Surgery, and Midwifery, both theoretical and clinical, and Surgical Dressing, and in Hygiene and Public Health. They receive free instruction, and on passing the two Apothecary Examinations are employed by the Government to take charge of the Government dispensaries and some small hospitals in the remote rural areas and country villages, but are only permitted to practise while so employed in Government service, and are subject to the control of the District Medical Officers.

These Apothecaries to a large extent provide for the medical treatment of the poor villagers in remote districts and where fully qualified Medical Practitioners are not available.

Details of staff, fees, courses of study, and rules for students and the history of the College are embodied in the Annual Calendar, copies of which are sent free to Medical Schools in Great Britain, Principal Educational Institutions, and to Government Departments in the Colony.

### GENERAL.

The chief events of interest in connection with the College are the following :—

The building of the new 3-storey block was begun, to accommodate the entire Physiology Department, College Offices, Library, and Students' Common Room. The convenience of having all these under one roof during rainy weather, from the point of view of the Registrar and Professor of Physiology, will be very great. When this work is completed the Anatomy and Physiology equipment will be entirely modern, and with whole-time professional teachers in both subjects will provide facilities for the instruction of students in these subjects comparing favourably with any to be encountered East of Suez.

Owing to the increasing demand of the Department of Medical and Sanitary Services for qualified Apothecaries, and the very restricted accommodation available in the existing Chemistry and Pharmacy Laboratory, it was found necessary to duplicate the classes in these subjects, and Government sanction was obtained to incur the necessary expenditure on teaching and equipment. About 50 students are now in training in this class.

Under the scheme for Free Bursaries for poor students set up last year four appointments were made in September, 1927; three of the successful candidates are at present studying in the Pre-medical Class in University College and one entered the Medical College on October 1.

A whole-time Professor of Anatomy has been appointed on a salary of £800—£1,150 sterling, and Archibald Gordon Smith, M.B. (Glas.), F.R.C.S. (Eng.), selected for the post by the Secretary of State, took up duties early in January, and already a notable advance in the teaching of Anatomy has resulted.

### ACADEMICAL.

Seventeen students passed and qualified for L.M.S. Diploma during the year 1926–27, and 18 new students were admitted on passing the Pre-medical Examination.

*Distribution of Medical Students.*

October, 1926. May, 1927.			October, 1926. May, 1927.		
1st year ..	15	.. 18	4th year ..	21	.. 20
2nd year ..	24	.. 23	5th year ..	53	.. 45
3rd year ..	2	.. 5	Total ..	115	111

*Results of Examinations.*

	December, 1926.		March, 1927.		July, 1927.		Total.	
	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.
Final ..	.. 27	.. 5	.. 31	.. 5	.. 31	.. 7	.. 89	.. 17
2nd Professional	.. —	.. —	.. 14	.. 8	.. 19	.. 6	.. 33	.. 14
1st Professional	.. —	.. —	.. 14	.. 6	.. 15	.. 7	.. 29	.. 13
Pre-medical	.. —	.. —	.. 35	.. 11	.. 30	.. 7	.. 65	.. 18

*Apothecary Students.*

Admitted during the year October 1926-27 : 19.

*Classes.*

	October.	May.		October.	May.
1st year ..	29	.. 27	2nd year ..	23	.. 33

*Results of Examinations.*

	December, 1926.		March, 1927.		July, 1927.		Total.	
	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.	Sat.	Passed.
2nd Apothecaries	.. 5	.. 4	.. 6	.. 3	.. 18	.. 14	.. 29	.. 21
1st Apothecaries	.. —	.. —	.. 25	.. 17	.. 9	.. 3	.. 34	.. 20

*Finance.*

	Rs.
Revenue received during the year	.. 36,120
Expenditure incurred	.. 87,556

**X.—Lands and Survey.****LAND SETTLEMENT DEPARTMENT.**

**D**ESPITE the continued progress in land development for the last hundred years, a large proportion of the total area of the Island is still unoccupied and uncultivated. In general the title to such unoccupied areas is in the Crown, but the Crown has in the past by custom, and by enactment, recognized various claims of private title to land unoccupied or only recently occupied and developed.

The majority of these claims are extremely indefinite, and many are based on tradition alone or on ancient grants the meaning and scope of which are frequently in doubt. Adjudication on such claims is further complicated by the nature of the law of inheritance in Ceylon and the system of undivided shares

in land, so that the work of dealing with these claims is a matter of some complexity demanding much time and infinite patience.

This state of affairs has done much to retard the development of the Island, neither the Crown nor the claimants being in a position to give clear title or quiet possession to parties desirous of developing unoccupied land until all claims have been defined and adjudicated on.

Several attempts have been made to find a method of speedy adjudication on such claims, and finally in 1897 the Waste Lands Ordinance was passed, which gave to specially appointed officers of the Crown powers to inquire into claims and agree with claimants as to their settlement. This Ordinance contains provisions ensuring that all possible claims will be discovered, and further makes the Final Orders embodying the agreements arrived at instruments conferring title on the claimant or the Crown, as the case may be, while it is only where the Special Officer and the claimant fail to agree that the claim is referred to the ordinary Courts for adjudication.

A few years after the passing of this Ordinance the Land Settlement Department was formed with a view to the systematic settlement of all classes of land where title is in dispute between the Crown and the subject. As the question of title is involved accurate survey and frequent resurveys are necessary, and the immediate settlement of the whole Island is therefore a task beyond the resources of the Colony. It has been necessary accordingly to concentrate the trained officers available on these districts where there is a demand for land and settlement is therefore urgent, and in general also more complicated and difficult, while at the same time officers are being trained in areas such as the dry zones of the north where land is of little value, and claims are few and comparatively simple, these areas being selected as far as possible where land development may be expected in the future.

This system, evolved by experience, has been found to work well, and the Department, by insisting on its officers inspecting every plot of land which they settle and in general doing their work on the land, has gained confidence and goodwill of the people. During the year under review 427,097 acres of all classes of land have been settled, and 5 claims have had to be referred to Court for adjudication.

Since 1901 settlement surveys covering an area of 5,444,241 acres have issued to the Department, and settlement of 4,737,267 acres is complete, leaving a balance of 706,974 acres in hand awaiting settlement. Of this balance area approximately 177,000 acres lie in the Ratnapura District, 94,000 acres in the Kurunegala District, 86,000 acres in the Kalutara District,

71,000 acres in the Province of Uva, 59,000 acres in the Trincomalee District, 49,000 acres in the North-Central Province, and 35,000 acres in the Galle District, with small areas in Nuwara Eliya, Matale, and Colombo Districts. Large areas in the Hambantota, Trincomalee, Kalutara, and Nuwara Eliya Districts and in the Province of Uva and the North-Central Province with extents 174,000 acres, 58,000 acres, 37,000 acres, 2,600 acres, 52,000 acres and 10,000 acres respectively have been surveyed on topographical plans, and can be speedily settled. The real work lies mainly in the Ratnapura, Kurunegala, Kalutara, and Galle Districts. Nearly 110,494 acres of new block surveys and 14,059 acres of topographical surveys have been issued during 1927 for settlement purposes.

### SURVEY DEPARTMENT.

The principal operations of the Survey Department for the period under review comprised block, application, forest, town surveys, and levelling.

*Block Surveys.*—These consisted of 129,845 acres of new work and 15,130 acres of topographical inset surveys.

The following plans were issued during the year :—

- (a) Block survey plans of 230 villages covering an area of 110,354 acres, containing 18,163 lots.
- (b) Two topographical plans containing 559 lots, covering an area of 14,059 acres.

Surveys of 144 requisitions for settlement and demarcation surveys together with the surveys of 586 applications were completed and sent to the Settlement Officer.

*Extract Plans.*—115 extract plans consisting of 865 lots covering an area of 1,651 acres were issued in connection with the surveys of Crown requisitions and applications in the block survey area.

The total area now covered by block survey is 3,171,758 acres and topographical inset surveys 2,187,169 acres.

*Application Surveys : Final Village Plans.*—85 plans for 128,743 acres in 2,830 lots were issued to the Government Agents and Assistant Government Agents during the year. The total area covered by the final village plans in the hands of Government Agents and Assistant Government Agents now stands at 2,322,408 acres contained in 75,747 lots on 3,315 final village plans.

*Preliminary Plans.*—1,582 plans for 18,545 acres in 8,682 lots and 4 miscellaneous plans for 577 acres in 245 lots, making a total of 1,586 plans for 19,122 acres in 8,927 lots, were forwarded to Government Agents, Assistant Government Agents, the Settlement Officer, and the Director of Irrigation.

*Supplementary Surveys.*—838 supplementary surveys consisting of 5,871 lots covering 15,002 acres have been made and marked on preliminary plans and final village plans already issued.

*Acquisition Plans.*—277 acquisition preliminary plans and supplementary final village plans for 1,410 acres in 1,831 lots were forwarded to the Hon. the Colonial Secretary.

*Applications.*—1,099 applications covering 3,254 acres were surveyed for paddy, 125 applications covering 2,308 acres for tea, 107 applications covering 1,157 acres for rubber, 1,192 applications covering 3,211 acres for coconut, 1,212 applications covering 1,807 acres for building purposes, 1,508 applications for 3,710 acres for garden cultivation, 12 applications covering 36 acres for rubber and coconut, 18 applications covering 493 acres for tea and rubber, 12 applications covering 153 acres for citronella, and 1 application covering 4 acres for cardamoms.

There has been a 7 per cent. further increase in the demand for land during the year. This increase would have been higher still had it not been for the restriction of applications to areas under 20 acres.

*Forest Surveys.*—Five forest survey plans for 10,379 acres in 1,893 lots were issued during the year.

*Town Planning and Assessment Surveys.*—Ten surveyors were engaged upon these surveys. Negombo was completed, and plans will shortly be issued. Chilaw and Jaffna were commenced.

*Precise Levelling : Levelling.*—The outturn during the field season (mid January to mid November) was nearly 600 miles of double levelling, comprising 22 lines. Rather more than half of this levelling was carried out along hilly roads up-country and in mid-country. The following circuit has now been completed and has been subdivided by lines from Gampola to Nuwara Eliya, Uraniya to Badulla, and Badulla to Bibile :—Kandy - Gampola - Ginigathena - Nuwara Eliya - Badulla - Diya-talawa - Wellawaya - Muppane - Bibile - Uraniya - Madugoda - Kandy. A circuit, Bibile - Batticaloa - Pottuvil - Muppane - Bibile, has also been levelled, and in addition the Colombo road from Haputale to Pelmadulla.

*Tidal Observatories.*—Observations for an accurate redetermination of mean sea level at Colombo are awaiting the construction of a new well for the Harbour Works Automatic



Tide Gauge. Permission has been obtained from the Admiralty to erect an observatory in the Royal Naval Dock Yard at Trincomalee. An automatic tide gauge has been ordered from England, and will arrive early in 1928. In the meantime a well for the tide gauge has kindly been constructed by the Civil Engineer in charge of works, who has also undertaken to build a shelter.

### METEOROLOGY.

*General Remarks.*—There is marked variation in climate among the different parts of Ceylon. In the low-country, with a mean temperature of 80° F., a noticeable feature is the small range of both temperature and pressure. There is, however, wide divergence between the moist conditions in the south-west of the Island, where the average annual rainfall varies from 100 to over 200 inches, and the dry zone areas of the north, north-west, and south-east.

Altitudes up to 8,000 feet occur inland, and there the temperature is cooler, and shows a more extensive range. There is a corresponding change in vegetation, and the conditions are altogether more akin to those in the temperate zone.

*Rainfall.*—The rainfall of 1927 was above average in most of Uva and the Eastern and Southern Provinces and in rather more than half of the Western and Central Provinces. Deficits preponderated slightly in the North-Western Province and rather more definitely in the North-Central Province, while they were very marked in the Northern Province and the northern and central parts of Sabaragamuwa.

Padupola heads the list with 233·6 inches or 14·1 above its own average, Watawala being next with 227·7 inches. Carney, Ingoya, and Blackwater, which are the stations with the highest averages, failed to reach their averages this year, though all three recorded over 200 inches. The biggest offsets above their average were at stations on the other side of the hills, at which the north-east monsoon forms the more important factor.

At the other extreme Mannar waterworks only recorded 24·68, closely followed by Elephant Pass saltern 25·15 and Ponparippu 25·6. Marichchukkadi had 31·4 this year and still holds the lowest average, namely, 34·6.

The chief features of the distribution through the year were the unusually heavy rain of March and the deficiency in October. The south-west monsoon after a very wet beginning in May and early June gave less than average rainfall in July and August.

*Temperature.*—Temperature variations were not particularly well marked in 1927. In most cases the maxima were a trifle lower, and the minima a trifle higher than those in 1926.

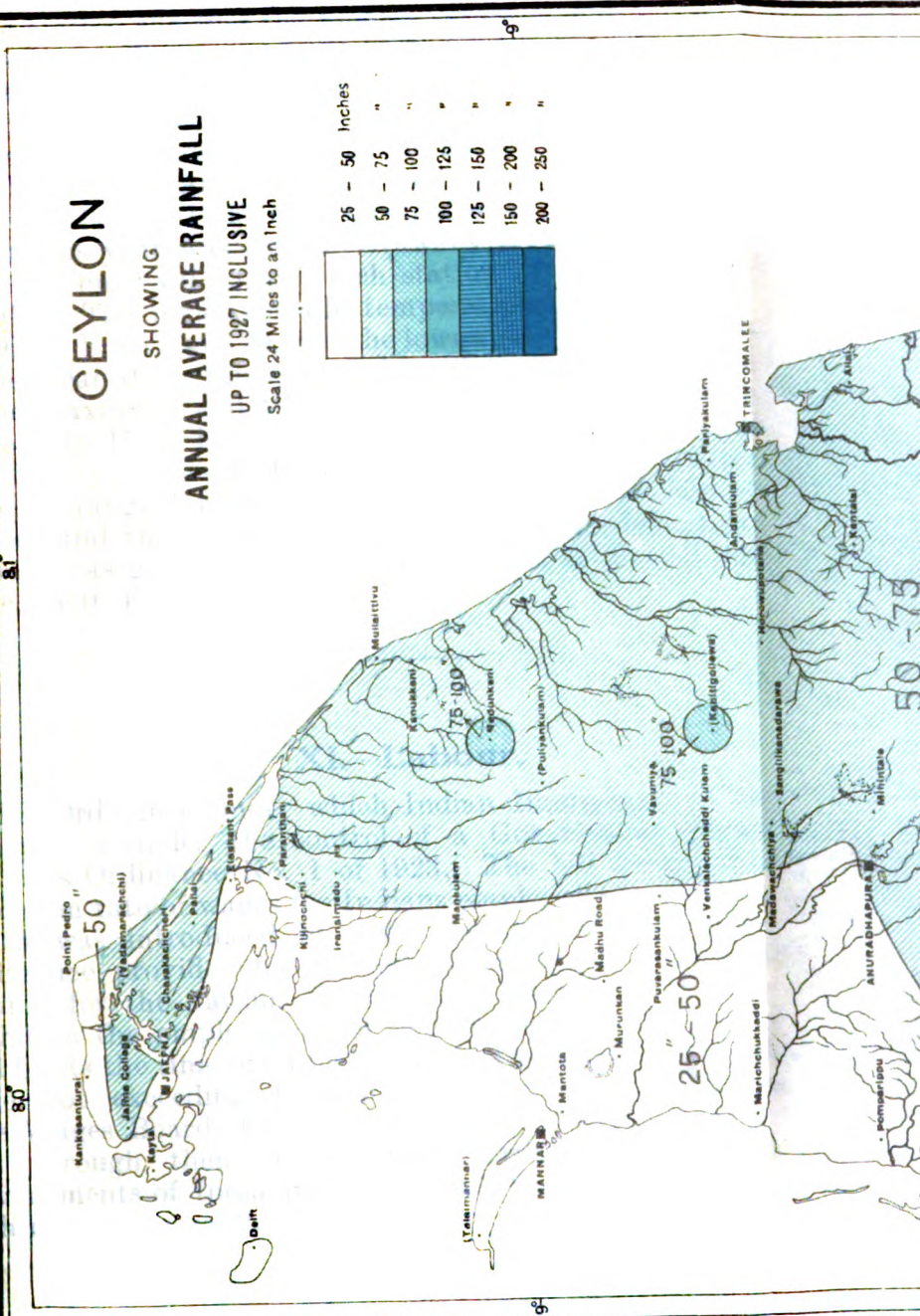
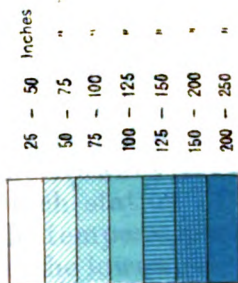
# CEYLON

SHOWING

## ANNUAL AVERAGE RAINFALL

UP TO 1927 INCLUSIVE

Scale 24 Miles to an inch





Nuwara Eliya showed the biggest variation ( $+0.8$ ), a nominally greater value at Hakgala being not truly comparable owing to a recent change in the site of the shed.

The station showing the highest mean shade temperature for the year was Trincomalee  $82.9^{\circ}$  F., and lowest Nuwara Eliya with  $60.1^{\circ}$  F. The figures for Colombo and Kandy were  $81.0^{\circ}$  F. and  $77.0^{\circ}$  F. respectively.

The highest shade temperature in air recorded during the year was  $98.2^{\circ}$  F. at Anuradhapura on September 3. The highest on record is  $103.7^{\circ}$  F. at Trincomalee on May 12, 1890. The lowest this year was  $34.6$  at Nuwara Eliya (6,000 feet above sea level) on April 13, at which station  $27.1^{\circ}$  F. was recorded in 1914. The highest shade temperature in Colombo in 1927 was  $91.4^{\circ}$  F. on April 20, and the lowest  $66.9^{\circ}$  F. on January 10.

The mean daily range, *i.e.*, the difference between the mean of the maximum and the mean of the minimum, was highest at Badulla,  $17.5^{\circ}$  F., and lowest at Galle,  $8.0^{\circ}$  F. At Colombo and Kandy it was  $12.0^{\circ}$  F. and  $14.8^{\circ}$  F., respectively. The absolute range for the year, *i.e.*, the difference between the highest and the lowest readings actually recorded at any one station, was greatest at Nuwara Eliya,  $42.3^{\circ}$  F. and lowest at Galle,  $18.0^{\circ}$  F.

## XI.—Labour.

THE Ordinance under which Indian Immigrant Labour was placed under the control of a Government department was Ordinance No. 1 of 1923. The bill to secure a legal minimum rate of wages for Indians employed on Ceylon estates which was introduced in 1926 became law in 1927. The Ordinance provides for the establishment of Estates Wages Boards for the various districts and among other provisions prohibits the employment of children under 10 years of age and limits the time of employment to 9 hours per day (including time not exceeding 1 hour taken for the midday meal). The Wages Boards have not yet fixed the wages for any area, but through them a settlement arrived at between the Governments of India and Ceylon will be given effect to. The cash rates proposed for time work are :—

		Men, Cents.		Women, Cents.		Children, Cents.
Low-country	..	50	..	40	..	30
Mid-country	..	52	..	41	..	31
Up-country	..	54	..	43	..	32

Rice of good quality and unblended is to be issued at rates not exceeding Rs. 6·40 per bushel, a price generally below the market price.

In addition, a free issue of rice is to be made to meet the needs of widows and non-workers, or possibly free meals will be given for non-working children.

The work of the Department in India is controlled by an Emigration Commissioner with a large staff at Trinchinopoly.

The Board of Indian Immigrant Labour composed of officials and unofficials advises the Controller.

The funds required for the administration of the department are obtained from acreage fees collected from tea, rubber, cacao, and cardamom estates employing Indians supplemented by a grant from Government. The rate is levied quarterly, and amounts annually as a rule to Rs. 5·25 per acre for tea and Re 1·75 per acre for rubber, cacao, or cardamom. Estates employing a small Indian labour force are assessed, not on an acreage, but on a *per capita* basis, which is cheaper than the former. Tea is assessed at three times the rate of the other products referred to, as tea planting requires about three times as much labour as the other products. The present system excludes coconut estates although about 30,000 Indian labourers now work on coconut estates.

It costs the Labour Department about Rs. 19·97 per head annually to recruit, repatriate, and protect Indian assisted labour. All the expenses of recruitment are met free of cost to the labourers, and no advances made to them in consideration of recruitment are recoverable at law in India or Ceylon.

There are about 7,500 to 10,000 estates over 10 acres in extent in the planting districts in Central and South Ceylon, and Indians are employed on 1,852 of these, the rest being worked by indigenous labour. Nearly all the largest estates, however, are worked wholly or partially by Indian labour, coconut estates excepted.

There is no indentured labour in Ceylon; all labour as a rule is employed at daily rates or contract rates and paid monthly on a civil contract of hire and service.

The following figures illustrate the movement of Indians into and from Ceylon :—

	Entering Ceylon.			Leaving Ceylon	
	Unassisted.	Assisted.		Total	for India.
1922	.. 85,071	.. 77,636	.. 162,707	.. 145,363	
1923	.. 83,256	.. 89,859	.. 173,115	.. 128,172	
1924	.. 88,787	.. 153,989	.. 242,776	.. 139,877	
1925	.. 101,324	.. 125,585	.. 226,909	.. 158,457	
1926	.. 110,853	.. 101,746	.. 212,599	.. 241,607	
1927	.. 124,895	.. 159,398	.. 284,293	.. 298,543	

Of those estate labourers entering Ceylon the following assisted emigrants had been in Ceylon before : —

1924.	1925.	1926.	1927.
62,474	.. 57,570	.. 51,330	.. 66,055
41 per cent. of whole .. 45 per cent. of whole .. 50 per cent. of whole .. 41 per cent. of whole			

These figures prove how attractive Ceylon estates are to the rural workers in South India, who find in Ceylon better economic, climatic, and social conditions than they experience in their own villages. The figures for 1927 constitute a record.

Labourers entering Ceylon from India undergo quarantine in India at Mandapam or Tataparai.

In 1927 there were probably about 885,000 Indians in Ceylon or nearly one-sixth of the total population. There were 719,552 on estates : 241,200 men, 234,131 women, and 244,221 children.

Assisted Indians are recruited by kanganies on licences issued by the Controller, and their activities are supervised from first to last.

The recruiting areas of Trichinopoly, Salem, Madura, and Vellore are covered with agencies where advice, help, and supervision are administered as the recruits are presented by kanganies. The labourers are transported by rail or omnibus to Trichinopoly, the headquarters camp—a model institution, laid out architecturally on modern town planning lines, with electric lights, water carriage drainage, and every modern comfort. Thence the assisted labourers proceed to Mandapam Camp, another model institution ; and there are smaller model resting camps in Ceylon at Polgahawela and Colombo.

These labourers, from the moment they enter an agency, are provided free of cost with cooked food or travelling rations, drink, lodging, medical treatment, vaccination, hookworm cure, baths, lights, fares, escort, and, where needed, free clothes and blankets, and even pocket money until they arrive on the estate, where work is guaranteed to them by law for six days a week.

Indians unable to work and fit to travel home and Indian vagrants are, if they so desire, repatriated to India at the expense of the Ceylon authorities and escorted to their homes. Special cheap fares are allowed on the Ceylon Government Railway to Indian estate labourers returning to India. The numbers repatriated at public expense in recent years were : 1924, 571 ; 1925, 1,851 ; 1926, 2,442 ; 1927, 2,302.

Indians enjoy in Ceylon all the political and legal rights enjoyed by other races. They have two special Indian seats in the Legislative Council, and an Indian Emigration Agent stationed in Ceylon to look after their interests.

The clauses of the Washington Convention of 1919 regarding the protection of female and child labour are legally enforceable in Ceylon.

Assisted Indian immigrants are almost entirely estate labourers who are housed free of cost on estates; the average number occupying a room 12 feet by 10 feet and a verandah 10 feet by 6 feet being about 3·8. From January, 1922, to end of 1927 on estates employing Indians there have been erected 134,047 rooms for labourers at a cost of Rs. 48,847,836, and this great scheme of agricultural housing reform is still in progress.

These rooms are built to Government specification and under Government supervision, and the regulations insist on adequate light, air, ventilation, drainage, &c. Latrines and protected water supply are also insisted on. There are 52,280 latrines on estates employing Indians, while 116,821 rooms have a pipe-borne water supply. There are 84,159 garden plots allotted to labourers on these estates.

The birth rate on estates employing Indians in 1927 was 34·8 per 1,000 as compared with the general Ceylon rate of 39·5. The death rate was 28·2 per 1,000 as compared with the general Ceylon rate of 21·7. The birth- and death- rates of Indian estate labourers is steadily improving every year.

The planting districts proper are well served with hospitals and dispensaries, both Government and estates owned. In few countries in the world is such generous provision made for the health of labourers, and that free of all cost to them.

There are no epidemics as a rule on Ceylon estates, and there is little malaria. There is a great deal of avoidable disease and premature mortality, due to the ignorance of mothers in the care of children, the prevalence of venereal disease, and the general insanitary habits, ignorance, and recklessness of Indian immigrants. But there is a steady improvement annually, and the present standard of health on Ceylon estates is rarely equalled in the East.

There is little serious crime amongst Indians on Ceylon estates. The labourers are a law-abiding industrious people. Strikes are practically unknown. The chief disturbance is the futile movement of labour caused by employers offering cash inducements to labourers through kanganies to commit breach of their monthly contracts of hire and service.

Indians on Ceylon estates receive in real wages, cash, free houses, free firewood, free medical aid, maternity benefit, free rice when ill, often free meals for children and gifts at festivals, &c. (of clothes or money), and rice below cost price. These real wages are between 50 and 100 per cent. higher than what Indian

rural labourers receive in India. Cash wages are paid for time work, task work, piece work, &c., and range from about 50 cents a day to over one rupee on the average.

The immigration of Indians into Ceylon has been going on for centuries as there is great commercial intercourse between the two countries and as the superior climatic and economic conditions of Ceylon attract Indian traders and labourers.

The immigration of Indians to Ceylon estates has been going on for nearly a century, and the system now in vogue is a credit to all concerned and an object lesson in immigration. That this is the view of those best qualified to judge is shown by the following opinions.

REMARKS MADE BY THE HON. SIR MUHAMMAD HABIBULLAH, K.C.S.I., K.C.I.E., KT., MEMBER, VICEROY'S EXECUTIVE COUNCIL (1927).

*Trichinopoly Depôt.*

“Through the courtesy of Mr. Bowden I was taken round the Depôt and shown the system in vogue in handling the emigrants from the moment of their arrival until their departure by train to Mandapam. I also saw the cooking arrangements, the hospital, and other amenities. The object of my visit was to gain first-hand knowledge, and I am indeed grateful to Mr. Bowden for having enabled me to do so. The new colony is in course of construction, and after completion it will be self-contained in every respect. The site is excellent, and the colony when it springs into existence should be most attractive.

“I ought to add that, besides the emigrants who were returning to Ceylon after spending some time in this country, those who were proceeding thither for the first time appeared to view with satisfaction their future in that country.

“The staff employed at the Depôt were very kind and considerate to the emigrants.”

*Mandapam Camp.*

“It afforded me the greatest pleasure to go round the camp this day in the company of Mr. Bowden and the officers responsible for its upkeep. Its lay-out, the scrupulous attention paid to its sanitation, the care bestowed towards the comforts, conveniences, and health of the emigrants who are collected here prior to embarkation rouse one's admiration. A fairly large number of emigrants whom I had seen in the Trichinopoly Camp yesterday arrived this morning, and I watched with interest the various stages for their examination and verification prior to their admission, including that by the Protector of



**Emigrants.** It is no exaggeration to say that this Camp may well claim to be the best in the matter of organization and thoroughly satisfactory management.

*Mandapam Camp School.*

"I was indeed very glad to visit the school maintained for the benefit of the children of the staff employed in the Camp. There are also two trained female teachers employed in the institution, and I regard this as a special feature over which the management might well be congratulated. I put a few questions to the Scouts, who answered them very intelligently, and thus gave me the impression that young though they are they have already conceived a commendable spirit of 'service.' The drill by the boys was most interesting. They seemed to evince the greatest pride in their performance. The students seemed to be very intelligent and highly enjoyed the instruction imparted to them."

REMARKS MADE BY MAJOR J. R. WEBB WHO ACCOMPANIED  
A PARTY OF HEALTH OFFICERS UNDER THE AUSPICES  
OF THE LEAGUE OF NATIONS (1928).

*Trichinopoly Depôt and Ceylon Emigration Commissioner's  
Head Office.*

"The party of 18 participants of the Health Interchange of the League of Nations, who represent eleven different countries of the Far East, spent a most instructive hour and a half looking round this institution. It was most interesting to many who have to deal with the medical aspect of such work in other parts of the Far East. The participants all agreed that the institution was a finely built one and very well organized one. The points which attracted most attention were: the history, the finance, the recruiting, the medical examination, and preliminary treatment of emigrants with essential oils, which treatment was seen; the kitchen and feeding arrangements and the hospital."

## **XII.—Miscellaneous.**

### **LEGISLATION, 1927.**

**T**WENTY-SEVEN Ordinances were passed during the year, some of them being amending Ordinances which call for no special comment.

The more important Ordinances are—

*The Naval and Military Goods (Exemption from Customs) Ordinance, No. 3 of 1927.*—This Ordinance re-enacts in a consolidated and amended form the provisions of Ordinances No. 20 of 1892 and No. 22 of 1896, which relate to the exemption from

customs duty in certain cases of articles imported for the use of His Majesty's Regular Naval and Military Forces. The new Ordinance extends the exemption to exports and also to articles imported or exported for the use of the Royal Air Force.

*The Obscene Publications Ordinance, No. 4 of 1927.*—This Ordinance gives effect to the International Convention for the Suppression of the Circulation of and Traffic in Obscene Publications which was signed at Geneva on September 12, 1923.

*The School Teachers' Pension Ordinance, No. 6 of 1927.*—This Ordinance enables rules to be made for the granting of pensions to teachers in assisted schools.

*The Waste Land Ordinance, No. 8 of 1927.*—This Ordinance was introduced in accordance with the recommendations contained in the First Interim Report of the Land Commission (Sessional Paper XVIII. of 1927). Its object is to prevent the improvident alienation by villagers of their claims to unsettled land.

*The Young Men's Buddhist Association, Colombo, Ordinance, No. 11 of 1927.*—This Ordinance incorporates the Young Men's Buddhist Association, Colombo.

*The Stamp Ordinance, No. 19 of 1927.*—This Ordinance amends the duties in schedule B of the Stamp Ordinance, 1909, in accordance with the recommendations contained in the Second Interim Report of the Taxation Commission (Sessional Paper XX.—1927).

*The Motor Car Ordinance, 1927 (No. 20 of 1927).*—This Ordinance reproduces in a consolidated and amended form the substance of those parts of the Vehicles Ordinance, No. 4 of 1916, which relate to motor cars, and also the numerous regulations on the subject which have from time to time been made under that Ordinance.

The more important alterations in the law made by the new Ordinance are as follows :—

- (i.) Under Ordinance No. 4 of 1916 all motor cars are taxed by weight, the tax on cars licensed to be used for fee or reward being double the tax on private cars. Under the new Ordinance, while the tax on private passenger cars remains the same, the tax on passenger cars to be used for hire will be determined by the number of passengers to be carried. Under the old law the tax on cars used for carrying goods for fee or reward is double the tax on the same cars if kept exclusively for the owner's use. Under the new Ordinance the tax on both classes of cars is the same, viz., the tax now charged on cars used for fee or reward. The duty on a licence for a motor car not equipped with rubber tyres is doubled.

- (ii.) Under the new Ordinance all cars are required to take out a licence.
- (iii.) Considerable alterations have been made under the law as to registration of motor cars.
- (iv.) By the new Ordinance the old system of annual driving licences is abolished. In lieu thereof, a driver of a motor car is required to hold a certificate of competence which will be issued after a driving test. When once issued, a certificate of competence will continue in force until revoked by a court after conviction. A certificate of competence will only authorize the holder to drive the class of car named therein. A certificate of competence to drive a car granted under any Order-in-Council made under the (Imperial) Motor Car (International Circulation) Act, 1909, is to be deemed to be a certificate of competence granted under the new Ordinance.
- (v.) Licences for motor ploughs and harrows and motor cars used exclusively for hauling ploughs and harrows are exempted from duty.
- (vi.) Cars having left hand steering are prohibited, but cars imported before the commencement of the Ordinance are exempted from this provision.
- (vii.) The owner of a hiring car or lorry has either to insure against third party risks or to deposit a sum with the licensing authority as security for the payment of any compensation which he or the driver of the motor car may become liable on account of any injury to person or property caused by the motor car. This portion of the Ordinance has not yet come into operation.

2. Part I of the Fourth Schedule to the Ordinance contains detailed provisions as to omnibuses. Part II. of that schedule requires motor cabs plying for hire in Colombo to be fitted with taximeters and contains detailed provisions as to the conduct of taxi-cab drivers and the scale of fees to be charged.

*The Mortgage Ordinance, No. 21 of 1927.*—This Ordinance amends and consolidates certain laws relating to mortgages.

*The Rubber Restriction Ordinance, No. 22 of 1927.*—Under section 3 of this Ordinance provision is made for enabling a portion of the surplus of the Rubber Restriction Fund to be utilized for rubber research and propaganda.

*The Registration of Documents Ordinance, No. 23 of 1927.*—This Ordinance reproduces in an amended and consolidated form the substance of the Land Registration Ordinance, 1891, as amended by Ordinances Nos. 13 of 1908, 29 of 1917, 21 of 1918, 11 of 1919, and 22 of 1921, and Ordinances Nos. 8 and 21 of 1871 relating to the registration of bills of sale.

2. The new Ordinance does not make any fundamental alteration in the present law, but introduces a large number of alterations in detail.

3. The most important alterations are—

- (a) Section 8 widening the class of instruments which will require registration so as to include all instruments which can possibly affect a subsequent purchaser, but introducing exceptions in the favour of letters of administration to the estate of an intestate, decrees where the action has been registered as a *lis pendens*, appointments of an assignee in insolvency debentures and similar documents, and monthly tenancies ;
- (b) Section 9 discontinuing the separate register of seizure notices kept under section 237 of the Civil Procedure Code and requiring such notices to be registered under this Ordinance.
- (c) Section 10 providing, in effect, that an unregistered will shall not be defeated by a disposition by the heir unless at the date of such disposition, being not less than one year after the death of the testator, letters of administration granted on the footing that the testator died intestate have been registered ;
- (d) Section 11 enabling a *lis pendens* to be registered as soon as the plaint has been accepted by the court, but before it has been served on the defendant ;
- (e) Section 12 making registration of a partition action as a *lis pendens* compulsory ;
- (f) Section 17 (2) excepting a contract of sale of goods made in the ordinary course of business from the requirement of registration as a bill of sale ;
- (g) Section 21 legalizing bills of sale of future or after acquired movable property ;
- (h) Section 30 introducing the system of “ priority notices ” whereby an intending purchaser or mortgagee can obtain priority of registration for his deed by registering a priority notice of his intention to register the deed, the registration of the deed then relating back to the date of the priority notice or of the deed, whichever is the later ;

- (i) Section 32 revising the law as to caveats; and
- (j) Section 35 enabling the Registrar-General to make corrections in the registers, subject to appeal to the District Court.

*The Bills of Exchange Ordinance, 1927 (No. 25 of 1927).*—This Ordinance reproduces the provisions of the Bills of Exchange Act, 1882, of the Imperial Parliament. Under section 2 of Ordinance No. 5 of 1852 this Act is in force in Ceylon. But it was considered desirable that the law should be reproduced in a local enactment.

*The Medical Ordinance, 1927 (No. 26 of 1927).*—This Ordinance amends and consolidates the law relating to the Department of Medical and Sanitary Services, the Ceylon Medical College, the Ceylon Medical Council, medical practitioners, dentists, midwives, and pharmacists.

*The Indian Labour Ordinance, No. 27 of 1927.*—This Ordinance makes provision for the introduction of minimum rates of wages for Indian labourers.

### LOCAL GOVERNMENT.

During 1927 (as during the three preceding years) no new District Councils were established. The eight existing Urban District Councils, viz., those of Negombo and Ratnapura, constituted as from January 1, 1922, and those of Chilaw, Jaffna, Kalutara, Matale, Matara, and Panadure constituted as from January 1, 1923, continued to carry on the administration of their respective towns. On March 4 the Legislative Council concluded its debate (begun on February 12) on the motion reintroducing in Council the amending Ordinance to extend the operation of local government throughout the Island. (This Ordinance was postponed at its second reading on November 15, 1923, pending the collection of certain information, which was subsequently furnished by the Local Government Board and published as a Sessional Paper (IV. of 1925)) The debate resulted in the acceptance by Government of an amendment of the original motion providing for the appointment of a Select Committee of the Legislative Council "to consider the working of Ordinances relating to District Councils, Local Boards, Sanitary Boards, Village Committees, and to make such recommendations as will make it possible to extend local self-governing institutions throughout the country." The report of the Committee, which was appointed at a later stage of the meeting, is awaited. In consequence of this development no further action was taken with regard to the application

received in 1925 for the establishment of an Urban District Council for Ambalangoda. As regards the request of the China-fort Muslim Association (also made in 1925) for the constitution of an Urban District Council for Beruwela, Government decided, in view of the strong representations put forward against the proposal and of the inadequacy of the revenue of the town, not to take action at present under the Local Government Ordinance.

In the course of 1927 Government gazetted a preliminary notice under section 9 (2) of "The Local Government Ordinance, No. 11 of 1920," with a view to the establishment of an Urban District Council for the important and populous Sanitary Board area of Dehiwala-Mount Lavinia, including a portion of the village Ratmalana South; and the Local Government Board recommended to Government that similar action should be taken with regard to the Local Board town of Moratuwa. These preliminary steps are intended to ascertain the wishes of the inhabitants in the areas concerned and do not necessarily result in the constitution of Councils.

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